Owner's Guide and Installation Instructions

Air Sourced Heat Pump Water Heater

MPi 554 Series

Install a Rheem

This water heater must be installed and serviced by a qualified person.
Please leave this guide with the householder.

PATENTS
This water heater may be protected by one or more patents or registered designs in the name of Rheem Australia Pty Ltd.

TRADE MARKS
® Registered trademark of Rheem Australia Pty Ltd.
™ Trademark of Rheem Australia Pty Ltd.

Note: Every care has been taken to ensure accuracy in preparation of this publication.
No liability can be accepted for any consequences, which may arise as a result of its application.

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HOUSEHOLDER – We recommend you read pages 4 to 18.

The other pages are intended for the installer but may be of interest.

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ABOUT YOUR WATER HEATER

WATER HEATER APPLICATION

This water heater is designed for use in a single family domestic dwelling for the purpose of heating potable water. Its use in an application other than this may shorten its life.

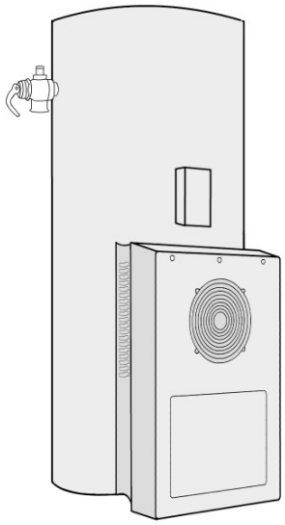
MODEL TYPE

Your Rheem® air sourced heat pump water heater is designed for outdoor installation only. The model you have chosen is a RheemPlus 554 series model. The 554 325 model water heater is recommended for connection to a minimum 16 hour per day power supply. The 554 410 model water heater is recommended for connection to a 24 hour per day power supply.

A Rheem heat pump water heater consumes less energy than an electric water heater. The impact on an electricity account will depend on the tariff arrangement of the water heater replaced and where you live. Contact your energy provider for more information on tariff arrangements and cost comparisons.

The Rheem air sourced heat pump water heater has a Rheemglas® vitreous enamel lined steel cylinder. The water heater's evaporator absorbs heat from the surrounding air and transfers this heat into the water.

When hot water is drawn off and cold water enters the tank, the thermostat activates a fan, a compressor and a circulator. The fan draws outside air in through the air inlet louvres at the side of the heat pump module and the pump circulates water from the bottom of the storage tank through a heat exchanger. Heat is absorbed from the air by an evaporator and transferred into the water through the heat exchanger. The resulting cold air is then discharged through the air outlet grille back to atmosphere and the heated water is circulated back into the storage tank. This process continues while heating is required until the water in the storage tank reaches a temperature of 60°C.



Even on cloudy or cold days, heat is drawn from the surrounding air. The heat pump will operate when the ambient air temperature is between a minimum of 3°C to 5°C and maximum of 45°C to 55°C. The booster heating unit will operate when the ambient air temperature is outside of this temperature range if heating is required. The efficiency of the water heater increases as the ambient air temperature increases within the operating range of the heat pump.

Automatic safety controls are fitted to the water heater to provide safe and efficient operation.

ELECTRIC BOOSTING

Ice may begin to form on the evaporator reducing the heat pump efficiency, when the ambient air temperature falls below 7°C and the heat pump has been operating for an extended period. At ambient air temperatures below 3°C to 5°C, the water heater deactivates the heat pump operation and switches to the booster heating unit. During this period the evaporator will defrost if necessary.

At ambient air temperatures above 45°C to 55°C, the water heater deactivates the heat pump operation and switches to the booster heating unit.

The water inside the tank will be heated to a temperature of 70°C by the electric booster heating unit if heating is required. The temperature setting of the thermostat controlling the booster heating unit is not adjustable and is set at 70°C.

	Boost Capacity	
Element size	554 325	554 410
2.4 kW*, 3.6 kW*	180 litres	200 litres
1.8 kW	100 litres	-

* The boost capacity of a 2.4 kW or 3.6 kW low watts density heating unit if used is 100 litres (554 325) or 125 litres (554 410).

MAINS PRESSURE

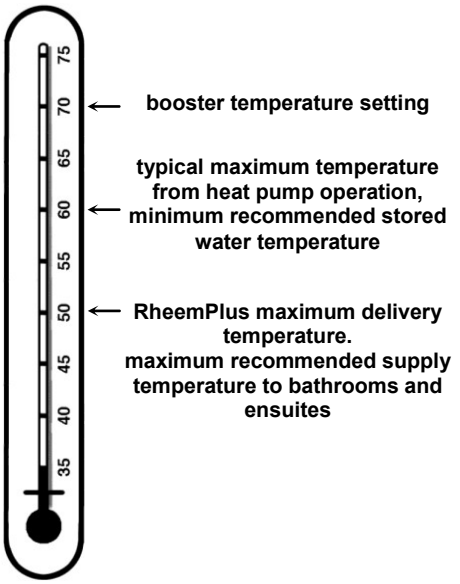
The water heater is designed to operate at mains pressure by connecting directly to the mains water supply. If the mains supply pressure in your area exceeds that shown on page 21, a pressure limiting valve must be fitted. The supply pressure should be greater than 350 kPa for true mains pressure operation to be achieved. A minimum water supply pressure of 200 kPa is required to enable the heat pump circulator and heat pump system to operate effectively.

HOW HOT SHOULD THE WATER BE?

A RheemPlus water heater is fitted with a temperature limiting valve that ensures the delivered water temperature does not exceed 50°C.

The system controls (compressor, evaporator and fan) will operate until a water temperature of 60°C is reached. If the ambient air temperature is outside of the heat pump's operating range, the water temperature is boosted automatically to 70°C by the thermostatically controlled booster electric heating unit, if heating is required

To meet the requirements of the National Plumbing Standard the temperature of the stored water must not be below 60°C.



HOTTER WATER INCREASES THE RISK OF SCALD INJURY

This water heater can deliver water at temperatures which can cause scalding. Check the water temperature before use, such as when entering a shower or filling a bath or basin, to ensure it is suitable for the application and will not cause scald injury.

A RheemPlus water heater will not deliver temperatures exceeding 50°C, in accordance with AS 3498. The risk of scald injury will be reduced.

TEMPERATURE ADJUSTMENT

The thermostats controlling the heat pump and the booster heating unit are factory set and not adjustable. A RheemPlus water heater is temperature limited to 50°C at the hot water outlet.

⚠ WARNING

This water heater is only intended to be operated by persons who have the experience or the knowledge and the capabilities to do so. This water heater is not intended to be operated by persons with reduced physical, sensory or mental capabilities i.e. the infirm, or by children. Children should be supervised to ensure they do not interfere with the water heater.

This water heater uses 240 V AC electrical power for operation of the control systems and the electrically operated components. The removal of the access cover(s) will expose 240 volt wiring. They must only be removed by a qualified person.

- Do not use **aerosols, stain removers and household chemicals** near the water heater whilst it is working. Gases from some aerosol sprays, stain removers and household chemicals are corrosive to the materials used in the heat pump system.
- Do not store swimming pool chemicals, household cleaners, etc., near the water heater.
- Ensure the air flow, air inlet louvres and outlet grille are not obstructed in any way at any time.

SAFETY

This water heater is supplied with a thermostat, two over-temperature energy cut-outs, a combination temperature pressure relief valve and a temperature limiting valve. These devices must not be tampered with or removed. The water heater must not be operated unless each of these devices is fitted and is in working order.

The operation of the over-temperature cut-out on the thermostat indicates a possibly dangerous situation. If the over-temperature cut-out operates, it must not be reset and the water heater must be serviced by a qualified person.

If the electrical supply conduit to the water heater is damaged, it must be replaced by a qualified person in order to avoid a hazard. Phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

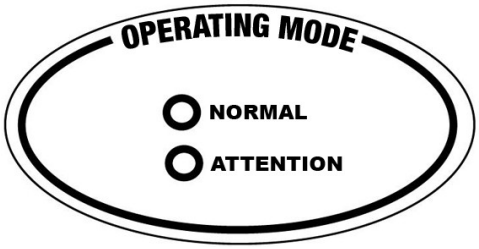
⚠ **Warning:** For continued safety of this water heater it must be installed, operated and maintained in accordance with the Owner's Guide and Installation Instructions.

The Rheem warranty may not cover faults if relief valves or other safety devices are tampered with or if the installation is not in accordance with these instructions.

OPERATING MODE MONITOR

An operating mode monitor is located on the front of the heat pump module and houses a green and a red LED.

The green LED, marked "NORMAL", indicates the current operating mode of the heat pump water heater and the red LED, marked "ATTENTION", indicates a fault mode.



The green LED will emit either a constant glow or a series of flashes, with a 2 second interval between each series. A series of long green flashes may also be emitted.

The red LED will emit a series of flashes, with a 2 second interval between each series, only if there is a particular fault condition with the system.

The modes are:

Flashes	Operational Modes
solid green (remains on)	Standby mode – water is hot
1 x green	Call for heating received – system checks performed Note: unit may wait and continue flashing until compressor has cooled from its last operation
2 x green	Circulator commences circulation
3 x green	Heat pump operation – compressor and fan running
long green	Heating unit on – ambient air temperature below 3°C to 5°C or above 45°C to 55°C
no green (remains off)	No power at the water heater or to the heat pump or a possible fault condition **Refer to notes below before calling for service**

Notes:

- **Power must be available at the water heater and to the heat pump for the LEDs to glow or flash.**
- When power is turned on or reconnected to the water heater, the red LED will emit a solid glow for three (3) seconds and then extinguish. This is normal operation and does not indicate a fault. The LED display will then return to the current operational status.
- If there is power to the water heater and the green LED is off or the red LED is flashing, this indicates there may be a fault condition with the water heater. The red LED may emit up to nine flashes in each series of flashes. Refer to "Possible fault condition" on page 7.
- **Time controlled power supply (power must be available at the water heater)**
  If the water heater is connected to a time controlled power supply, then during periods of no power supply at the water heater the LEDs will be off.

  This is not a fault condition, but a result of no power being available to energise the LEDs.

  The green LED will recommence glowing or flashing when power is available again at the water heater.
- **Heat pump operating range (power must be available to the heat pump)**
  The heat pump's operating range is between an ambient air temperature of a minimum of 3°C to 5°C and a maximum of 45°C to 55°C. The heat pump will not operate when the ambient air temperature is outside the heat pump's operating range. If heating is required, the water heater will commence heating with the booster heating unit in booster heating mode (long green flash) instead.

  At the completion of this heating cycle by the booster heating unit (long green flash), the thermostat controlling the booster heating unit opens circuit cutting power to the heat pump causing the green LED to go out. This is not a fault condition, but a result of the power being cut to the heat pump by the thermostat.

  The green LED will remain off for an extended period of time until the water temperature in the top of the water heater drops to below 62°C and the thermostat closes circuit reinstating power to the heat pump, when the red LED will emit a solid glow for three (3) seconds and then extinguish. The green LED will then recommence to glow or flash.

  The green LED will glow (standby mode – water is hot) if the water temperature in the lower part of the water heater is 50°C or more.

  The green LED will flash if the water temperature in the lower part of the water heater is less than 50°C. If at least 45 minutes has elapsed after power is reinstated to the heat pump, i.e. 45 minutes after the red LED emitted a solid glow for three (3) seconds and then extinguished, heating of the water by the heat pump will recommence (3 x green flashes) if the ambient air temperature has moved back to within the heat pump's operating range, or the water heater will switch to the booster heating unit (long green flash) if the ambient air temperature is outside of the heat pump's operating range.
- **Possible fault condition**
  There may be a fault condition with the water heater if either:
  - there is power available at the water heater and the green LED is off, and
  - the water heater **has not** operated outside of the heat pump's operating range (refer to "Heat pump operating range" on page 7).

    Before phoning to arrange a service inspection due to the green LED being off, refer to "Heat Pump Is Not Operating" on page 15 in the "Save A Service Call" section of this Owner's Guide.

    or
  - the red LED is flashing – the red LED may emit up to nine flashes in each series of flashes

    The fault condition which led to the red LED flashing may be cleared after the backup heating cycle by the booster heating unit has completed. When heating is next required the red LED will recommence to flash the fault code for thirty (30) seconds and then extinguish. If the red LED then recommences to flash or recommences to flash after the heat pump next operates, a service call may be required.

    Before phoning to arrange a service inspection due to the red LED flashing, refer to "Heat Pump Is Not Operating" on page 15 in the "Save A Service Call" section of this Owner's Guide.

TIMER CONTROL

A timer can be installed in the electrical circuit to the water heater. The timer must be weatherproof if it is installed outdoors.

It may be desirable for the water heater not to operate between certain hours, such as during the peak period when connected to a Time of Use electricity supply due to a more expensive tariff rate applying.

A timer will affect the operating times of both the heat pump circuit and the booster heating unit.

Note: The 554 325 model water heater is recommended for connection to a minimum 16 hour per day power supply. The 554 410 model water heater is recommended for connection to a 24 hour per day power supply.

TO TURN OFF THE WATER HEATER

If you plan to be away from home for only a few nights, we suggest you leave the water heater switched on.

If it is necessary to turn off the water heater:

- Switch off the electrical supply at the isolating switch to the water heater.
- Close the cold water isolation valve at the inlet to the water heater.

TO TURN ON THE WATER HEATER

- Open the cold water isolation valve fully on the cold water line to the water heater.
- Switch on the electrical supply at the isolating switch to the water heater.

Note: When power is turned on or reconnected to the water heater, the red LED will emit a solid glow for three (3) seconds and then extinguish. This is normal operation and does not indicate a fault. The LED display will then return to the current operational status.

The water heater may take up to forty five minutes to commence operating when the power supply is switched on. The heat pump will only operate when power is available at the water heater, the water in the storage tank requires heating, the heat pump compressor is cool and the ambient air temperature is within the heat pump's operating temperature range of between a minimum of 3°C to 5°C and a maximum of 45°C to 55°C. If the ambient temperature is outside of this range, the water heater will commence heating with the booster heating unit.

When the heat pump is operating, the system will switch to the booster heating unit if the detected ambient air temperature is outside the operating temperature range of between a minimum of 3°C to 5°C and a maximum of 45°C to 55°C.

The system will not switch back to heat pump operation from the booster heating unit if the detected ambient air temperature has moved back within the heat pump's operating temperature range. The heating cycle will be completed by the booster heating unit.

Note: The heat pump may not turn on immediately after either having just completed a heating cycle and more hot water is drawn from the water heater or power is shut down to the compressor, either during or at the end of a heating cycle. The heat pump will wait until the compressor has cooled down and the conditions for start up are favourable in order to protect the compressor from damage. This will be a minimum of forty five (45) minutes and may take up to ninety (90) minutes from the last heating cycle.

GOING ON HOLIDAYS

If you plan to be away from home for a few nights, we suggest you leave the water heater switched on. If you plan to be away for a longer period, conserve energy by switching off the isolating switch to the water heater (refer to "To Turn Off The Water Heater" on page 8).

PRECAUTIONS

Where damage to property can occur in the event of the water heater leaking, the water heater must be installed in a safe tray. Construction, installation and draining of a safe tray must comply with AS/NZS 3500.4 and all local codes and regulatory authority requirements.

The water heater must be maintained in accordance with the Owner's Guide and Installation Instructions. Refer to "Regular Care" on page 10 and to "Anode Inspection and Replacement" on page 12.

If this water heater is to be used where an uninterrupted hot water supply is necessary for your application or business you should ensure that you have back up redundancy within the hot water system design. This should ensure the continuity of hot water supply in the event that this water heater were to become inoperable for any reason. We recommend you seek advice from your plumber or specifier about your needs and building back up redundancy into your hot water supply system.

HOW DO I KNOW IF THE WATER HEATER IS INSTALLED CORRECTLY?

Installation requirements are shown on pages 19 to 22. The water heater must be installed:

- by a qualified person, and
- in accordance with the installation instructions, and
- in compliance with Standards AS/NZS 3500.4, AS/NZS 3000 and all local codes and regulatory authority requirements.

In New Zealand, the installation must also conform with Clause G12 of the New Zealand Building Code.

VICTORIAN CUSTOMERS

Notice to Victorian Customers from the Victorian Plumbing Industry Commission. This water heater must be installed by a licensed person as required by the Victorian Building Act 1993.

Only a licensed person will give you a Compliance Certificate, showing that the work complies with all the relevant Standards. Only a licensed person will have insurance protecting their workmanship for 6 years. Make sure you use a licensed person to install this water heater and ask for your Compliance Certificate.

DOES THE WATER CHEMISTRY AFFECT THE WATER HEATER?

The water heater is suitable for most public water supplies, however some water chemistries may have detrimental effects on the water heater, its components and fittings. Refer to "Water Supplies" on page 12.

If you are in a known harsh water area or you are not sure of your water chemistry, have your water checked against the conditions described on pages 12 to 13.

HOW LONG WILL THE WATER HEATER LAST?

The water heater is supported by a manufacturer's warranty (refer to page 43). There are a number of factors that will affect the length of service the water heater will provide. These include but are not limited to the water chemistry, the water pressure, the water temperature (inlet and outlet) and the water usage pattern. Refer to "Precautions" on page 9.

ENVIRONMENT

At the end of the service life of the heat pump water heater and prior to the water heater being disposed of, a person qualified to work with refrigerants must recover the refrigerant from within the sealed system. The refrigerant must not be vented to atmosphere. Phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

REGULAR CARE

MINOR SIX MONTH MAINTENANCE

It is recommended minor maintenance be performed every six months by the dwelling occupant.

The minor maintenance includes:

- Operate the easing lever on the temperature pressure relief valve. It is very important you raise and lower the lever gently. Refer to "Temperature Pressure Relief Valve" on page 11.

  ⚠ **Warning:** Exercise care to avoid any splashing of water, as water discharged from the drain line will be hot. Stand clear of the drain line's point of discharge when operating the valve's lever.

- Operate the easing lever on the expansion control valve (if fitted). It is very important you raise and lower the lever gently. Refer to "Expansion Control Valve" on page 11.

- Check the performance of the temperature limiting valve.

  Measure the water temperature from the hot tap nearest to the water heater with a thermometer. If the water temperature exceeds 50°C, phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection. Refer to "Temperature Limiting Valve" on page 11.

- Check the drain line from the safe tray (if one is installed) is not blocked.

MAJOR FIVE YEAR SERVICE

It is recommended a major five year service be conducted on the water heater.

⚠ **Warning**: Servicing of a water heater must only be carried out by a qualified person. Phone Rheem Service or their nearest Accredited Service Agent.

Note: The five year service and routine replacement of any components, such as the anode and relief valve(s), are not included in the Rheem warranty. A charge will be made for this work. Only genuine replacement parts should be used on this water heater.

The major service includes:

- Replace the temperature limiting valve.
- Replace the temperature pressure relief valve.
- Inspect and flush the expansion control valve (if fitted). If required, replace the valve.
- Inspect and if required, replace the anode.

  If the anode is not replaced, it should be replaced within three years of this service (refer to "Anode Inspection and Replacement" on page 12).

- Check the electric heating unit for excessive calcium build up or corrosion and replace if necessary.
- Check and inspect the heat pump module for operation.
- Visually check the unit for any potential problems.
- Inspect all connections.
- Check the condensate drain.
- Check the drain line from the safe tray (if one is installed) is not blocked.

Note: The water heater may need to be drained during this service. After the completion of the service, the water heater will take some time to reheat the water. Depending upon the power supply connection, hot water may not be available until the next day.

HEAT PUMP SYSTEM

It is recommended the evaporator and refrigeration system is checked every five years. In particularly dusty environments, it may be necessary to have the heat pump system checked and cleaned of dust and residue on a more regular basis.

TEMPERATURE PRESSURE RELIEF VALVE

This valve is near the top of the water heater and is essential for its safe operation. It is possible for the valve to release a little water through the drain line during each heating period. This occurs as the water is heated and expands by approximately 1/50 of its volume.

Continuous leakage of water from the valve and its drain line may indicate a problem with the water heater (refer to "Temperature Pressure Relief Valve Running" on page 17).

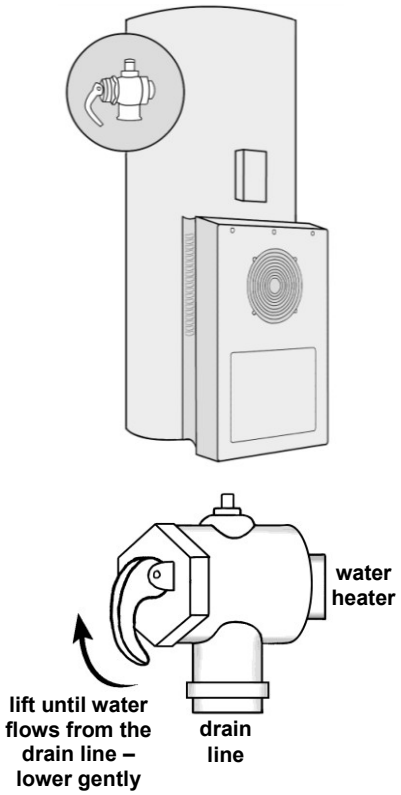
⚠ **Warning:** Never block the outlet of this valve or its drain line for any reason.

Operate the easing lever on the temperature pressure relief valve once every six months. **It is very important you raise and lower the lever gently.**

⚠ **DANGER:** Failure to do this may result in the water heater cylinder failing, or under certain circumstances, exploding.

⚠ **Warning:** Exercise care to avoid any splashing of water, as water discharged from the drain line will be hot. Stand clear of the drain line's point of discharge when operating the valve's lever.

If water does not flow freely from the drain line when the lever is lifted, then the water heater must be checked. Phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.



The temperature pressure relief valve should be replaced at intervals not exceeding 5 years, or more frequently in areas where there is a high incidence of water deposits (refer to "Water Supplies" on page 12).

TEMPERATURE LIMITING VALVE

A RheemPlus water heater is fitted with a temperature limiting valve at the hot water outlet. The valve is set to deliver water not exceeding 50°C.

The valve should be checked for performance every twelve months. This can be performed by measuring the water temperature from the hot tap nearest to the water heater with a thermometer. If the water is being delivered at a temperature exceeding 50°C, phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

The valve must be replaced at intervals not exceeding 5 years, or more frequently in areas where there is a high incidence of water deposits (refer to "Water Supplies" on page 12). Failure to do this may result in water at a temperature up to 70°C being delivered at the hot tap, increasing the risk of scald injury.

EXPANSION CONTROL VALVE

In many areas, including South Australia, Western Australia and scaling water areas, an expansion control valve is fitted to the cold water line to the water heater. The expansion control valve may discharge a small quantity of water from its drain line during the heating period instead of the temperature pressure relief valve on the water heater.

Operate the easing lever on the expansion control valve once every six months. **It is very important you raise and lower the lever gently.** The expansion control valve should be checked for performance or replaced at intervals not exceeding 5 years, or more frequently in areas where there is a high incidence of water deposits.

WATER SUPPLIES

This water heater must be installed in accordance with this advice to be covered by the Rheem warranty.

This water heater is manufactured to suit the water conditions of most public reticulated water supplies. However, there are some known water chemistries which can have detrimental effects on the water heater and its operation and / or life expectancy. If you are unsure of your water chemistry, you may be able to obtain information from your local water supply authority. This water heater should only be connected to a water supply which complies with these guidelines for the Rheem warranty to apply.

CHANGE OF WATER SUPPLY

The changing or alternating from one water supply to another can have a detrimental effect on the operation and / or life expectation of a number of components in this water heater.

Where there is a changeover from one water supply to another, e.g. a rainwater tank supply, bore water supply, desalinated water supply, public reticulated water supply or water brought in from another supply, then water chemistry information should be sought from the supplier or it should be tested to ensure the water supply meets the requirements given in these guidelines for the Rheem warranty to apply.

ANODE

The vitreous enamel lined cylinder of the water heater is only covered by the Rheem warranty when the total dissolved solids (TDS) content in the water is less than 2500 mg/L and when the correct colour coded anode is used. If an incorrect colour coded anode is used in the water heater, any resultant faults will not be covered by the Rheem warranty. In addition, the use of an incorrect colour coded anode may shorten the life of the storage tank.

The correct colour coded anode is as shown in the following table:

Total Dissolved Solids	Anode colour code
0 – 40 mg/L	Green
40 – 150 mg/L	Green or Black
150 – 400 mg/L	Black
400 – 600 mg/L	Black or Blue
600 – 2500 mg/L	Blue
2500 mg/L +	Blue (no cylinder warranty)

The changing of anodes must be carried out by a qualified person.

Note: Some water analysis reports may state the conductivity of the water rather than the level of total dissolved solids. Conductivity, measured in microsiemens per centimetre (μS / cm), is directly proportional to the TDS content of the water. TDS, in mg / L, is approximately 70% of the conductivity in μS / cm.

ANODE INSPECTION AND REPLACEMENT

The anode installed in your water heater will slowly dissipate whilst protecting the cylinder. The life of the cylinder may be extended by replacing the anode.

If the anode is not replaced during a five year service (refer to “Major Five Year Service” on page 10) then the maximum time after installation when the anode should be replaced for this water heater is 8 years.

For water supplies which are either softened, desalinated or where the water supply may alternate between a water tank and a reticulated public supply or another supply, it is recommended the anode be replaced within 5 years of installation.

CAUTION

If the water supply has a TDS greater than 150 mg/L and a green anode has not been changed to a black anode, or if the TDS is greater than 600 mg/L and the anode has not been changed to a blue anode, there is the possibility the anode may become overactive and hydrogen gas could accumulate in the top of the water heater during long periods of no use. In areas where this is likely to occur, the installer should instruct the householder on how to dissipate the gas safely.

If, under these conditions, the water heater has not been used for two or more weeks the following procedure should be carried out before using any electrical appliances (automatic washing machines and dishwashers) which are connected to the hot water supply.

The hydrogen, which is highly flammable, should be vented safely by opening a hot tap and allowing the water to flow. There should be no smoking or naked flame near the tap whilst it is turned on. Any hydrogen gas will be dissipated. This is indicated by an unusual spurting of the water from the tap. Once the water runs freely, any hydrogen in the system will have been released.

SATURATION INDEX

The saturation index (SI) is used as a measure of the water's corrosive or scaling properties.

Where the saturation index is less than –1.0, the water is very corrosive and the Rheem warranty does not apply to the water heater. In a corrosive water supply, the water can attack copper parts and cause them to fail.

Where the saturation index exceeds +0.40, the water is very scaling and the Rheem warranty does not apply to the water heater.

Water which is scaling may be treated with a water softening device to reduce the saturation index of the water.

CHLORIDE AND PH

Where the chloride level exceeds 250 mg/L the Rheem warranty does not apply to the water heater. In a high chloride water supply, the water can corrode stainless steel parts and cause them to fail.

Where the pH is less than 6.0 the Rheem warranty does not apply to the water heater. pH is a measure of whether the water is alkaline or acid. In an acidic water supply, the water can attack stainless steel parts and cause them to fail.

Water with a pH less than 6.0 may be treated to raise the pH. The water supply from a rainwater tank in a metropolitan area is likely to be corrosive due to the dissolution of atmospheric contaminants.

SUMMARY OF WATER CHEMISTRY ADVICE AFFECTING WARRANTY

The water heater is not suitable for certain water chemistries. Those chemistries are listed below. If the water heater is connected at any time to a water supply with the following water chemistry, the Rheem warranty will not cover any resultant faults:

Water Chemistry	**Component**
Total Dissolved Solids (TDS) > 2500 mg/L	water heater cylinder
Total Dissolved Solids (TDS) not suitable for anode type	water heater cylinder
Saturation Index (SI) < -1.0	water heater
Saturation Index (SI) > +0.4	water heater
Chloride > 250 mg/L	water heater
pH < 6.0	water heater

SAVE A SERVICE CALL

Check the items below before making a service call. You will be charged for attending to any condition or fault that is not related to manufacture or failure of a part.

NOT ENOUGH HOT WATER (OR NO HOT WATER)

- **Is the electricity switched on?**
  Inspect the isolating switch marked “HOT WATER” or “WATER HEATER” at the switchboard and the isolating switch (if one is installed) at the water heater and ensure they are turned on.

  Check the fuse marked “HOT WATER” or “WATER HEATER” at the switchboard.

- **Is a timer installed?**
  If a timer has been installed, ensure sufficient time has been allowed to reheat the storage tank.

- **Are you using more hot water than you think?**
  Is one outlet (especially the shower) using more hot water than you think?

  Very often it is not realised the amount of hot water used, particularly when showering. Carefully review the family’s hot water usage. As you have installed an energy saving appliance, energy saving should also be practised in the home.

  Adjust your water usage pattern to take advantage of maximum energy gains. Have your plumber install a flow control valve to each shower outlet to reduce water usage.

- **Heat pump fault**
  Has the heat pump developed a fault and the red LED is flashing?

  The heat pump will not operate and the water heater will switch to backup heating mode using the booster heating unit.

  Refer to “Heat Pump Is Not Operating” on page 15.

- **Temperature pressure relief valve running**
  Is the relief valve discharging too much water?

  Refer to “Temperature Pressure Relief Valve Running” on page 17.

- **Water heater size**
  Do you have the correct size water heater for your requirements?

  The sizing guide in the sales literature and on the Rheem website (www.rheem.com.au) suggests average sizes that may be needed.

WATER NOT HOT ENOUGH

You may find that due to heavy hot water usage the water temperature may be lower than normally expected, due to insufficient heating time being allowed. You will need to carefully plan your use of the hot water on such occasions.

A RheemPlus water heater is temperature limited to 50°C at the hot water outlet.

WATER TEMPERATURE TOO HIGH

A RheemPlus water heater is fitted with a temperature limiting valve set to deliver water not exceeding 50°C. If the water is being delivered at a temperature exceeding 50°C, phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection. Care must be taken by all householders when using hot water until the valve is serviced or replaced.

HEAT PUMP IS NOT OPERATING

There must be power available at the water heater and to the heat pump for the heat pump to operate and for the LEDs to glow or flash.

- **Time controlled power supply (no power at the water heater)**
  If the water heater is connected to a time controlled power supply, then during periods of no power supply at the water heater the LEDs will be off.

  This is not a fault condition, but a result of no power being available to energise the LEDs.

  The green LED will recommence glowing or flashing when power is available again at the water heater.

- **Heat pump operating range (no power to the heat pump)**
  The heat pump's operating range is between an ambient air temperature of a minimum of 3°C to 5°C and a maximum of 45°C to 55°C. The heat pump will not operate when the ambient air temperature is outside the heat pump's operating range.

  If heating is required, the water heater will commence heating with the booster heating unit in booster heating mode (long green flash) instead. The water will be heated to 70°C during these periods.

  At the completion of this heating cycle by the booster heating unit (long green flash), the thermostat controlling the booster heating unit opens circuit cutting power to the heat pump causing the green LED to go out.

  This is not a fault condition, but a result of the power being cut to the heat pump by the thermostat.

  The green LED will remain off for an extended period of time until the water temperature in the top of the water heater drops to below 62°C and the thermostat closes circuit reinstating power to the heat pump, when the red LED will emit a solid glow for three (3) seconds and then extinguish. The green LED will then recommence to glow or flash.

  The green LED will glow (standby mode – water is hot) if the water temperature in the lower part of the water heater is 50°C or more.

  The green LED will flash if the water temperature in the lower part of the water heater is less than 50°C. If at least 45 minutes has elapsed after power is reinstated to the heat pump, i.e. 45 minutes after the red LED emitted a solid glow for three (3) seconds and then extinguished, heating of the water by the heat pump will recommence (3 x green flashes) if the ambient air temperature has moved back to within the heat pump's operating range, or the water heater will switch to the booster heating unit (long green flash) if the ambient air temperature is outside of the heat pump's operating range.

- **Thermal cut out activated**
  Has the thermal cut out activated and the red LED is flashing a series of single flashes?

  The refrigeration circuit is protected by a thermal sensor. This will activate a thermal cut out in the event of thermal surges or excessive heat in the refrigeration system.

  If the thermal cut out has activated, the red LED will flash a fault mode of a series of single flashes and the heat pump will not operate. The water heater will switch to backup heating mode using the booster heating unit to ensure a supply of hot water. In backup heating mode the water will be heated to a temperature of 70°C.

  The thermal cut out will automatically reset itself when the booster heating unit has completed one heating cycle and the compressor cools down.

  Refer to "Backup heating mode and series of red flashes" on page 16.

- **Heat pump fault condition**
  If the heat pump has developed a fault, the heat pump will not operate, the red LED will flash a fault mode of a series of one (1) to nine (9) flashes.

  If a series of two (2) flashes occurs, the heat pump will not switch to backup heating mode. Phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

  If a single flash or a series of three (3) to nine (9) flashes occurs, the water heater will switch to backup heating mode to ensure a supply of hot water.

  Refer to "Backup heating mode and series of red flashes" on page 16.

- **Backup heating mode and series of red flashes**
  During the backup heating mode by the booster heating unit, caused by either the thermal cut out activating or a heat pump fault condition, the red LED will emit a series of flashes.

  At the completion of a heating cycle by the booster heating unit in the backup heating mode and the water temperature reaches 70°C, the thermostat controlling the booster heating unit opens circuit cutting power to the heat pump causing the red LED to go out. The fault mode is recorded to the heat pump controller's memory. The fault condition which led to the red LED flashing may be cleared when the backup heating cycle has completed.

  Both LEDs will remain off for an extended period of time until the water temperature in the top of the water heater drops to below 62°C and the thermostat closes circuit reinstating power to the heat pump.

  The red LED will recommence to flash the fault mode for thirty (30) seconds and then extinguish. If the red LED then recommences to flash, the fault condition which led to the red LED flashing may not have cleared and there may be a problem with the heat pump. Count the number of red flashes and phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

  At the end of the thirty (30) second period, the green LED will commence to glow or flash.

  The green LED will glow (standby mode – water is hot) if the water temperature in the lower part of the water heater is 50°C or more.

  The green LED will flash if the water temperature in the lower part of the water heater is less than 50°C.

  Note: If the green LED is glowing, then to check whether there may be problem with the heat pump, open a hot tap and allow to run for ten to fifteen minutes. This will draw cold water into the lower part of the water heater and the green LED will commence to flash. Close the hot tap when the green LED commences to flash.

  The heat pump will commence to operate when the green LED is flashing and at least 45 minutes has elapsed after power is reinstated to the heat pump, i.e. 45 minutes after the red LED flashed the fault mode for thirty (30) seconds and then extinguished.

  If the heat pump stops operating and the red LED recommences to flash, the fault condition which led to the red LED flashing may not have cleared and there may be a problem with the heat pump. Count the number of red flashes and phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

  Note: If the ambient air temperature is outside of the heat pump's operating range, the water heater may switch to the booster heating unit (long green flash) to heat the water in booster heating mode.

  The fault mode is cleared from the heat pump controller's memory after the water heater successfully completes a full heat up cycle using the heat pump.

- **Green LED is off**
  There may be a fault condition with the heat pump if:

  - there is power available at the water heater and the green LED is off, and
  - the water heater **has not** operated outside of the heat pump's operating range – refer to "Heat pump operating range" on page 15.

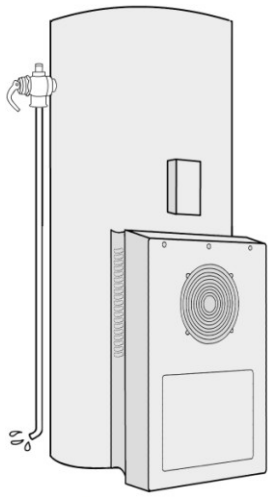
  Before phoning to arrange a service inspection:

  - inspect the isolating switch marked "HOT WATER" or "WATER HEATER" at the switchboard and the isolating switch (if one is installed) at the water heater and ensure they are turned on
  - check the fuse marked "HOT WATER" or "WATER HEATER" at the switchboard
  - if a timer has been installed, check the time settings
  - check the power supply tariff the water heater is connected to confirm power should be available to the water heater.

  Refer also to "Thermal cut out activated" on page 15 and to "Heat pump fault condition" on page 15.

  If the green LED is off and one of these conditions is not the cause, phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

TEMPERATURE PRESSURE RELIEF VALVE RUNNING



- **Normal Operation**
  It is normal and desirable this valve allows a small quantity of water to escape during the heating cycle. However, if it discharges more than a bucket full of water in 24 hours, there may be another problem.
- **Continuous dribble**
  Try gently raising the easing lever on the relief valve for a few seconds (refer to "Temperature Pressure Relief Valve" on page 11). This may dislodge a small particle of foreign matter and clear the fault. Release the lever gently.
- **Steady flows for long periods (often at night)**
  This may indicate the mains water pressure sometimes rises above the designed pressure of the water heater. Ask your installing plumber to fit a pressure limiting valve.

  ⚠ **Warning:** Never replace the relief valve with one of a higher pressure rating.
- **Heavy flows of hot water until the water heater is cold - then stops until water reheats**
  The water heater **must** be switched off at the isolating switch or switchboard. Phone Rheem Service or their nearest Accredited Service Agent to arrange for an inspection.

EXPANSION CONTROL VALVE RUNNING

If an expansion control valve is fitted in the cold water line to the water heater (refer to page 34) it may discharge a small quantity of water instead of the temperature pressure relief valve on the water heater. The benefit is that energy is conserved as the discharged water is cooler.

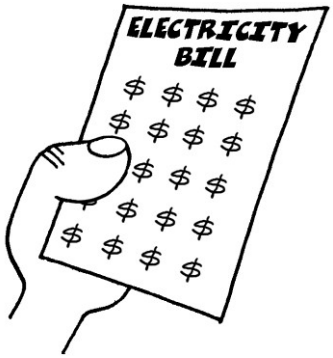
HIGHER THAN EXPECTED ELECTRICITY BILLS

With the installation of your new air sourced heat pump water heater, maximum electrical energy savings can be achieved. Should you at any time, feel your electricity account is higher than expected, we suggest you check the following points:

- Is the water heater operating in backup heating mode with the red LED flashing?

  If there is a fault condition with the heat pump system, the water heater will default to backup heating mode to ensure a supply of hot water. Check to see if the red LED is flashing as this will indicate there may be a fault with the system.

  Refer to "Heat Pump Is Not Operating" on page 15.



- Is the relief valve running excessively?

  Refer to "Temperature Pressure Relief Valve Running" on page 17.

- Is one outlet (especially the shower) using more hot water than you think?

  Refer to "Not Enough Hot Water" on page 14.

- Is there a leaking hot water pipe, dripping hot water tap, etc?

  Even a small leak will waste a surprising quantity of hot water and energy. Replace faulty tap washers, and have your plumber rectify any leaking pipe work.

- Has there been an increase in hot water usage?

  An increase in hot water usage will result in an increase in heat pump operation.

- Has your water heating tariff rate been increased by your electricity retailer since your previous account?

- Is the heat pump water heater on the same tariff as the water heater replaced?

  The impact on an electricity account will depend upon the tariff arrangement of the water heater replaced and where you live. Contact your energy provider for more information on tariff arrangements and cost comparisons.

- Prolonged periods of use when the ambient air temperature is outside of the heat pumps operating range will increase the amount of boosting and increase running costs.

IF YOU HAVE CHECKED ALL THE FOREGOING AND STILL BELIEVE YOU NEED ASSISTANCE, PHONE RHEEM SERVICE OR THEIR NEAREST ACCREDITED SERVICE AGENT.

INSTALLATION

THIS WATER HEATER IS FOR OUTDOOR INSTALLATION ONLY.
THIS WATER HEATER IS NOT SUITABLE FOR POOL HEATING.

INSTALLATION STANDARDS

The water heater must be installed:

- by a qualified person, and
- in accordance with the installation instructions, and
- in compliance with Standards AS/NZS 3500.4, AS/NZS 3000 and all local codes and regulatory authority requirements.

In New Zealand, the installation must also conform with Clause G12 of the New Zealand Building Code.

Victorian Installers

Notice to Victorian Installers from the Victorian Plumbing Industry Commission if this solar water heater is installed in a new Class 1 dwelling in the State of Victoria. The system model number is to be recorded on the Certificate of Compliance. It is also a requirement to provide the householder with permanent documentation recording the system model number exactly as it is shown in the 'List of systems capable of complying with the regulations' published by Sustainability Victoria (see www.sustainability.vic.gov.au). This documentation may be in the form of an indelible label adhered to the solar storage tank, or other suitable form placed in an accessible location, such as the meter box, for later inspection.

WATER HEATER APPLICATION

This water heater is designed for use in a single family domestic dwelling for the purpose of heating potable water. Its use in an application other than this may shorten its life.

If this water heater is to be used where an uninterrupted hot water supply is necessary for the application or business, then there should be redundancy within the hot water system design. This should ensure the continuity of hot water supply in the event that this water heater was to become inoperable for any reason. We recommend you provide advice to the system owner about their needs and building backup redundancy into the hot water supply system.

The 554 325 model water heater is recommended for connection to a minimum 16 hour per day power supply. The 554 410 model water heater is recommended for connection to a 24 hour per day power supply.

A Rheem heat pump water heater consumes less energy than an electric water heater. The impact on an electricity account will depend on the tariff arrangement of the water heater replaced and the installation location. Contact the energy provider for more information on tariff arrangements and cost comparisons.

STORAGE TANK AND HEAT PUMP MODULE

The heat pump water heater is made of two main components, the storage tank and the heat pump module. For transport and handling (weight) purposes both items are shipped separately and designed to be assembled at the installation site. The water heater must not be operated until both components are assembled. Refer to "Heat Pump and Tank Assembly" on page 24.

Take care when handling the heat pump module. The jacket of the heat pump module needs to be handled gently so as not to cause damage.

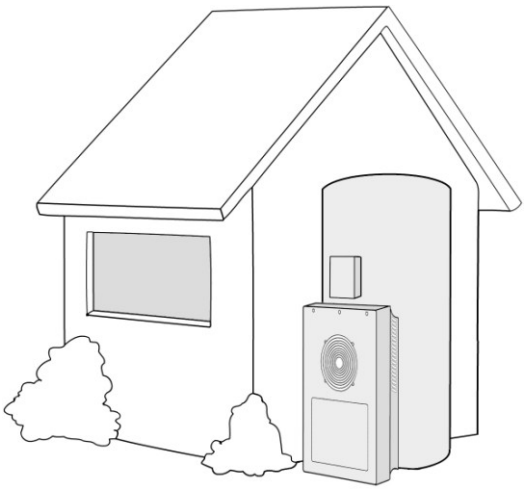
Care must be taken during transportation and handling. Do not lay the heat pump module down and do not tilt the heat pump module or the heat pump and storage tank assembly more than 30° from the vertical. This will displace the compressor lubricating oil. If the heat pump module or heat pump and storage tank assembly has been tilted more than 30° from the vertical during handling, it will need one hour to drain back before the power to the water heater can be switched on, otherwise damage to the compressor may result.

All packaging materials must be removed from the water heater prior to its installation. This includes the removal of the cardboard base of the carton from the underside of the water heater.

WATER HEATER LOCATION

The water heater is suitable for outdoor installation only. The water heater should be installed close to the most frequently used outlet and its position chosen with noise, safety and service in mind. Make sure people (particularly children) will not accidentally touch the air inlet louvres and outlet grille and that they are clear of obstructions and shrubbery.

It is advisable to install the water heater away from bedroom or living room windows as the system controls can generate a level of noise whilst they are operating. Consider the location in relation to neighbours' bedrooms and living room windows.



Clearance must be allowed for servicing of the water heater. The water heater must be accessible without the use of a ladder or scaffold. Make sure the temperature pressure relief valve lever is accessible and the top and front covers, system controls and thermostat can be removed for service.

You must be able to read the information on the rating plate. If possible leave headroom of one water heater height so the anodes can be inspected or replaced. Remember you may have to remove the entire water heater later for servicing.

It is recommended the heat pump water heater be installed at ground or floor level and must stand vertically upright. The base of the water heater is made of corrosion resistant material, and it may be placed directly in contact with the supporting surface. It is not necessary to allow for free air circulation under the base of the water heater.

Note: The water heater should not be placed in direct contact with a concrete surface that is less than two months old and not fully cured as this may attack the metal coating of the water heater base. A moisture barrier should be used between the two surfaces in this instance.

The water heater must be installed with a clearance of at least 100 mm from a wall. A clearance of at least 300 mm is required perpendicular from both the front air inlet louvres and the outlet grille to any wall or obstruction. Refer to the dimensions diagram on page 23.

The heat pump storage tank and module must be installed on a level slab or solid base of a minimum 900 mm wide x 650 mm deep. The heat pump module must be fully supported by the level slab or solid base.

The water heater must not be installed in an area with a corrosive atmosphere where chemicals are stored or where aerosol propellants are released. Remember the air may be safe to breathe, but the chemicals may attack the materials used in the heat pump system.

SAFE TRAY

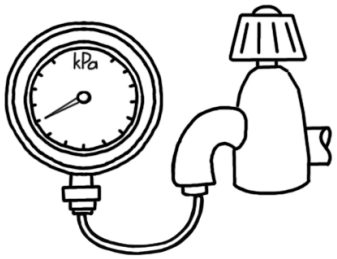
Where damage to property can occur in the event of the water heater leaking, the water heater must be installed in a safe tray. Construction, installation and draining of a safe tray must comply with AS/NZS 3500.4 and all local codes and regulatory authority requirements.

MAINS WATER SUPPLY

Where the mains water supply pressure exceeds that shown in the table below, an approved pressure limiting valve is required and should be fitted as shown in the installation diagram (refer to diagram on page 34).

Model	325, 410
Relief valve setting	1000 kPa
Expansion control valve setting *	850 kPa
Max. mains supply pressure	
With expansion control valve	680 kPa
Without expansion control valve	800 kPa
Min. mains supply pressure	200 kPa

* Expansion control valve not supplied with the water heater.



TANK WATER SUPPLY

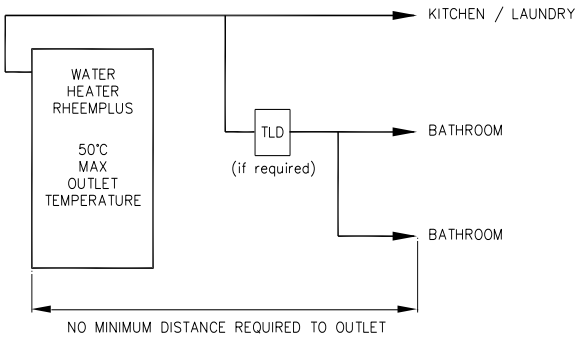
If the water heater is supplied with water from a tank supply and a minimum water supply pressure of 200 kPa at the water heater cannot be achieved, then a pressure pump system must be installed to allow the heat pump circulator to operate and avoid air locks in the circuit. Care must be taken to avoid air locks. The cold water line from the supply tank should be adequately sized and fitted with a full flow gate valve or ball valve.

HOT WATER DELIVERY

This water heater can deliver water at temperatures which can cause scalding.

A RheemPlus water heater will not deliver temperatures exceeding 50°C, in accordance with AS 3498. The risk of scald injury will be reduced.

It may be necessary to fit an additional temperature limiting device to meet the requirements of AS/NZS 3500.4 and / or regulatory and local authorities.



CIRCULATED HOT WATER FLOW AND RETURN SYSTEM

A RheemPlus MPi 554 series heat pump water heater cannot be installed as part of a circulated hot water flow and return system in a building.

REDUCING HEAT LOSSES

The cold water line to and the hot water line from the water heater must be insulated in accordance with the requirements of AS/NZS 3500.4. The insulation must be weatherproof and UV resistant if exposed.

ANODE TYPES

The vitreous enamel lined cylinder of the water heater is only covered by the Rheem warranty when the total dissolved solids (TDS) content in the water is less than 2500 mg/L and when the correct colour coded anode is used. If an incorrect colour coded anode is used in the water heater, any resultant faults will not be covered by the Rheem warranty. In addition, the use of an incorrect colour coded anode may shorten the life of the storage tank. The black anode is typically fitted as standard (refer to “Anode” on page 12).

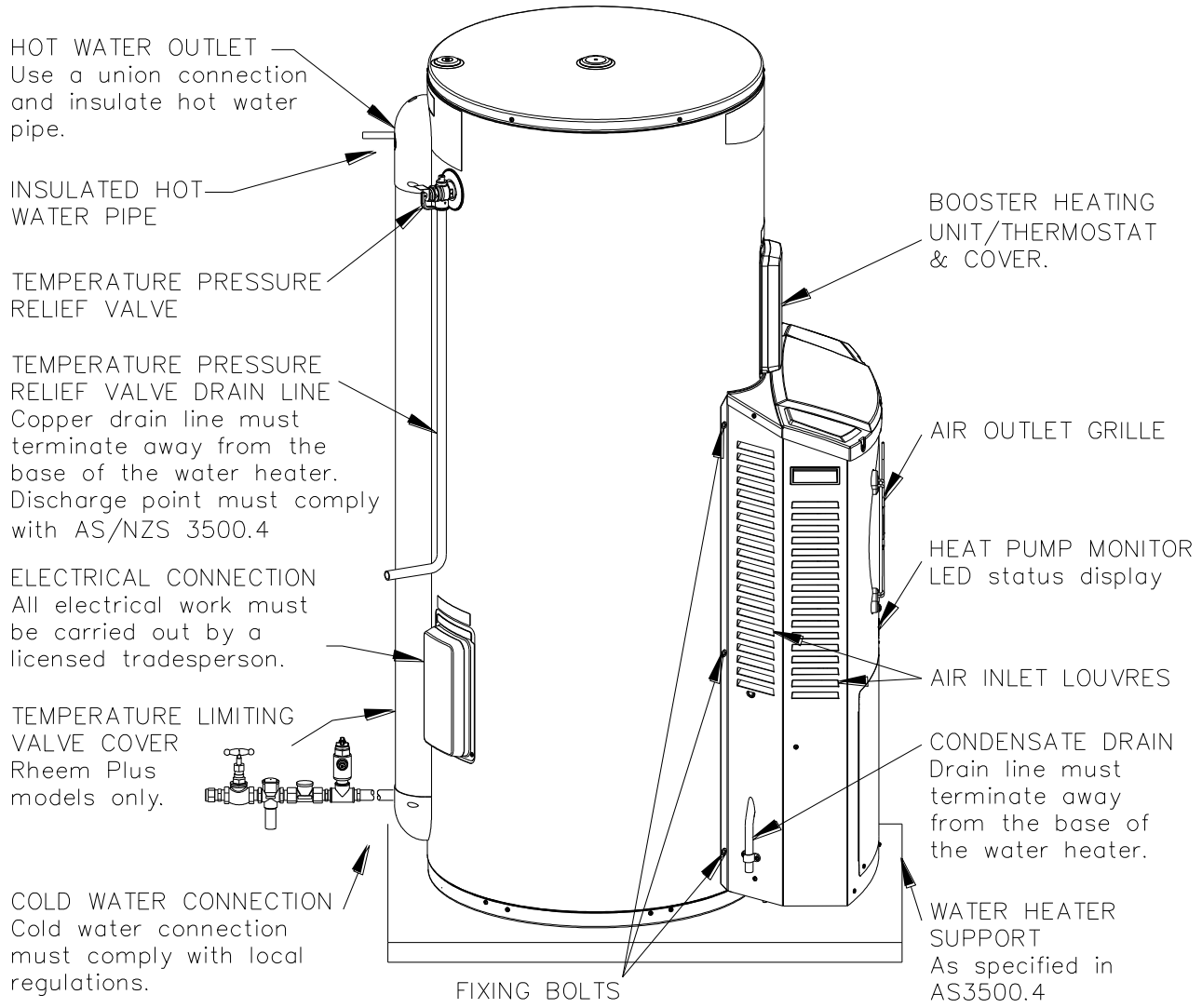
If an incorrect anode is used, there is also the possibility the anode may become overactive and hydrogen gas could accumulate in the top of the water heater during long periods of no use. In areas where this is likely to occur, the installer should instruct the householder on how to dissipate the gas safely (refer to “Caution” on page 13).

SADDLING - PIPE WORK

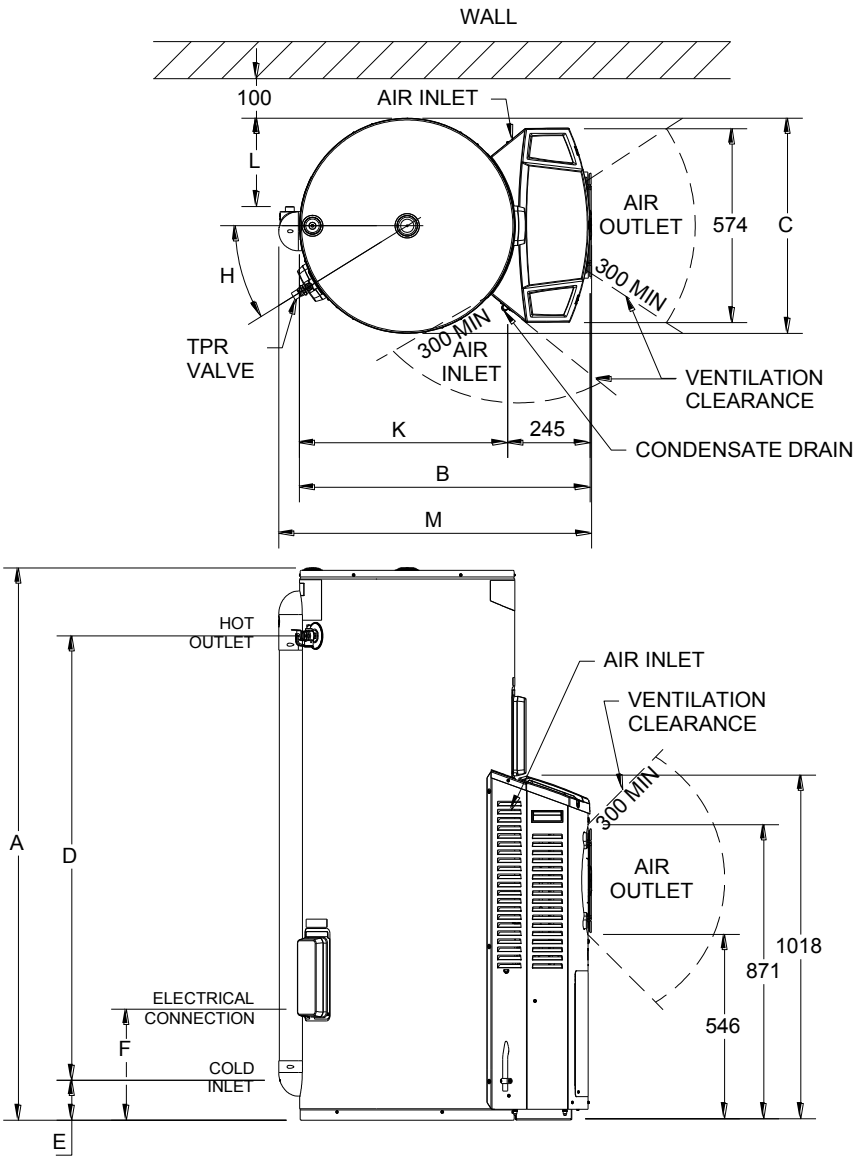
To prevent damage to the cylinder when attaching pipe clips or saddles to the water heater jacket, we recommend the use of self-drilling screws with a maximum length of 13 mm. Should pre drilling be required, extreme caution must be observed when penetrating the jacket of the water heater.

Note: If the cylinder is damaged as a result of attaching pipe clips or saddles to the jacket, any resultant faults will not be covered by the Rheem warranty.

TYPICAL INSTALLATON – OUTDOOR LOCATION


HOT WATER OUTLET
Use a union connection and insulate hot water pipe.
INSULATED HOT WATER PIPE
TEMPERATURE PRESSURE RELIEF VALVE
TEMPERATURE PRESSURE RELIEF VALVE DRAIN LINE
Copper drain line must terminate away from the base of the water heater.
Discharge point must comply with AS/NZS 3500.4
ELECTRICAL CONNECTION
All electrical work must be carried out by a licensed tradesperson.
TEMPERATURE LIMITING VALVE COVER
Rheem Plus models only.
COLD WATER CONNECTION
Cold water connection must comply with local regulations.
FIXING BOLTS
BOOSTER HEATING UNIT/THERMOSTAT & COVER.
AIR OUTLET GRILLE
HEAT PUMP MONITOR
LED status display
AIR INLET LOUVRES
CONDENSATE DRAIN
Drain line must terminate away from the base of the water heater.
WATER HEATER SUPPORT
As specified in AS3500.4

DIMENSIONS AND TECHNICAL DATA



System number		554 325	554 410
Tank model number		T554 325	T554 410
Storage capacity	litres	325	410
Boost capacity 1.8 kW	litres	100	-
2.4 kW*, 3.6 kW*	litres	180	200
Dimensions A	mm	1636	1842
B	mm	863	931
C	mm	638	686
D	mm	1317	1479
E	mm	114	127
F	mm	329	329
H	deg	32	30
K	mm	619	686
L	mm	262	286
M	mm	976	1044
Weight tank empty	kg	90	112
Weight heat pump	kg	42	42
Weight system empty	kg	132	154
Weight system full	kg	455	564

Heat pump module	180550
Maximum rated power input	3600 watts
Rated heat pump power input	800 watts
Booster heating unit rating	1800, 2400, 3600 watts
Refrigerant type	R134a
Refrigerant circuit pressure	3000 kPa
Weight heat pump module	42 kg

* The boost capacity of a 2.4 kW or 3.6 kW low watts density heating unit if used is 100 litres (554 325) or 125 litres (554 410).
Technical data is subject to change.

HEAT PUMP AND TANK ASSEMBLY

STORAGE TANK AND HEAT PUMP MODULE

The heat pump water heater is made of two main components, the storage tank and the heat pump module. For transport and handling (weight) purposes both items are shipped separately and designed to be assembled at the installation site. The water heater must not be operated until both components are assembled.

The heat pump storage tank and module must be installed on a level slab or solid base of a minimum 900 mm wide x 650 mm deep. The heat pump module must be fully supported by the level slab or solid base.

HEAT PUMP MODULE

The heat pump module is shipped in a box containing two hand holes to facilitate easy handling and lifting. The heat pump module is to be mounted against the side of the storage tank and must be fully supported by the level slab or solid base.

CAUTION: The heat pump module weighs approximately 42 kg. Use the hand holes provided in the sides of the packaging. Good lifting practice should be followed.

There are two flexible hoses provided inside the heat pump module. The flexible hoses are to be withdrawn from the module and fixed to the two water fittings on the heat pump storage tank during the assembly procedure.

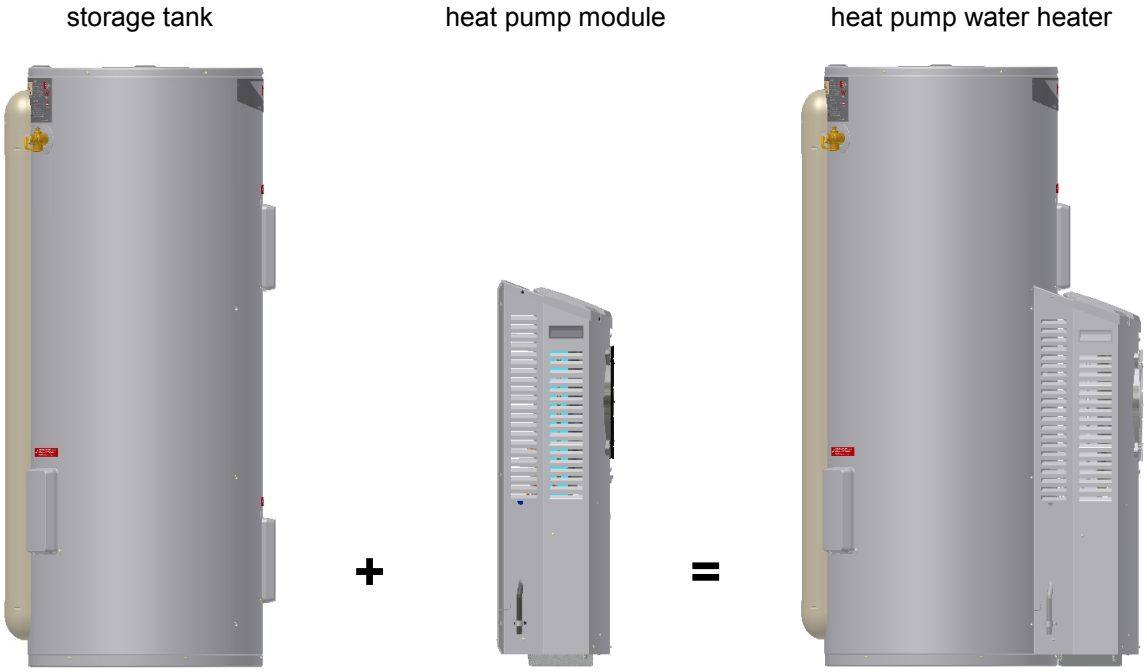
There are two connection points located on the underside of the control box in the heat pump module to which the power cable and tank sensor cable from the heat pump storage tank are connected during the assembly procedure.

STORAGE TANK

The heat pump storage tank and module must be installed on a level slab or solid base of a minimum 900 mm wide x 650 mm deep. The storage tank is designed to receive the heat pump module.

There are two water fittings located at the side of the storage tank to which flexible hoses from the heat pump module are connected during the assembly procedure.

A power cable and a tank sensor cable are provided behind the lower front cover of the storage tank. These are to be withdrawn from behind the lower front cover and connected to the control box in the heat pump module during the assembly procedure.



KIT

There is a kit supplied with the heat pump module (PN 080199) and a kit supplied with the 410 model heat pump storage tank (PN 290122).

The components supplied in the kit and required for the installation are:

Part No	Kit Components and Description	Quantity
080199	**Kit Installation Heat Pump Module Integrated**	
126558	Installation instructions heat pump module integrated	1
052158	Saddle clamp 20 mm Clipsal 261/20	1
080021	Screw phillips pan head No. 8 x 13 zinc plated black	2
080156	Screw pack of 3 M6 x 12 HD bolts	2
080203	Stud M6 x 25 zinc plate	3
080204	Nut hex whizzlock M6	3

290122	Kit Heat Pump Module Seal 410	
087052	Cover strip heat pump housing top	1
160032	Tape foam 406E 18 mm x 7 mm thick	1

ASSEMBLY PROCEDURE

⚠ **Warning:** The heat pump must be assembled, plumbed and filled with water prior to power being connected and switched on.

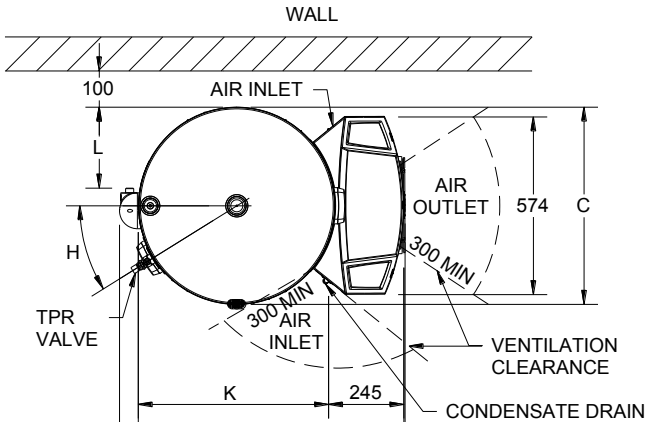
The following procedure should be followed to properly place the heat pump module in position and connect to the storage tank:

1. **Heat Pump Storage Tank:** Remove all packaging including the carton base from the heat pump storage tank and position in its intended location, supported by a level slab or solid base.

   The water connections may be on either the left or right hand side and should be parallel to the wall.

   The storage tank must be positioned at least 100 mm from the wall. If a minimum clearance of 100 mm is not allowed for, the heat pump module will not be able to be completely connected to the storage tank.

   The storage tank must also be positioned such that when the heat pump module is in position, there is a clearance of at least 300 mm perpendicular from both the front air inlet louvres and the outlet grille to any wall or obstruction.



Step 1 – position storage tank at least 100 mm from the wall and allow for at least 300 mm ventilation clearance (325 litre system shown)

2. **Lower Front Cover:** Remove the two screws securing the lower front cover to the storage tank.
   - Remove the lower front cover from the storage tank.

Step 2
remove screws
from lower front cover

Step 3
withdraw the power cable

3. **Power Cable:** Withdraw the power cable, housed behind the lower front cover, from the opening.

4. **Lower Front Cover:** Refit the lower front cover.

Step 4
refit lower front cover

Step 5
remove tape from tank sensor cable

5. **Tank Sensor Cable:** Remove tape from tank sensor cable and unfurl.

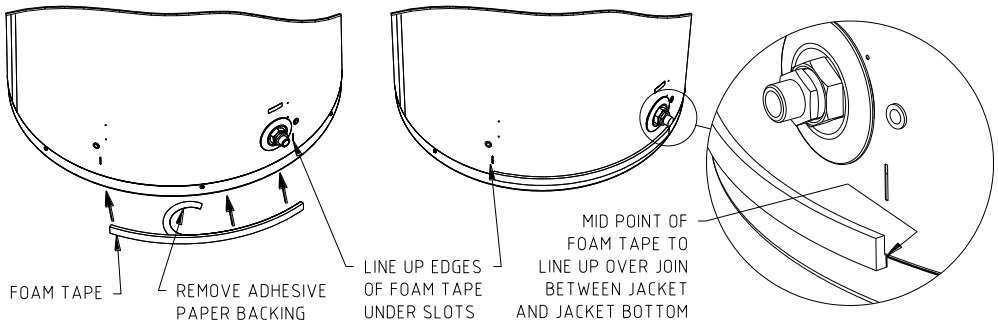
6. **Foam Tape:** (410 litre storage tank only) – Retrieve the length of foam tape from the kit supplied with the 410 storage tank.

   The foam tape is to be applied to the bottom at the front of the 410 litre storage tank.

   The ends of the foam tape are to line up with the two vertical slots in the jacket.

   The mid point of the tape (lengthways) is to line up over the join between the jacket of the storage tank and the jacket bottom.

   - Remove the backing from the foam tape and apply the foam tape to the storage tank.


FOAM TAPE
REMOVE ADHESIVE PAPER BACKING
LINE UP EDGES OF FOAM TAPE UNDER SLOTS
MID POINT OF FOAM TAPE TO LINE UP OVER JOIN BETWEEN JACKET AND JACKET BOTTOM

Step 5 – apply foam tape to 410 litre storage tank

7. **Heat Pump Module:** Remove all packaging including the carton base from the heat pump module and position in its intended location at the storage tank.

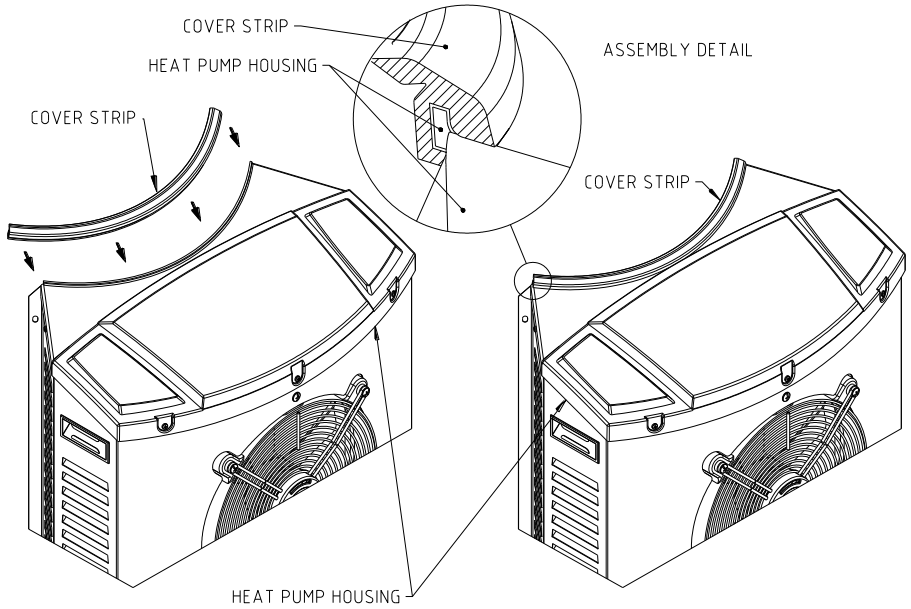
   CAUTION: The heat pump module weighs approximately 42 kg. Use the hand holes provided in the sides of the packaging. Good lifting practice should be followed.

8. **Cover Strip:** (410 litre storage tank only) – Retrieve the length of rubber cover strip from the kit supplied with the 410 storage tank.

   - Line up one end of the cover strip with one end of the heat pump housing black top, fitting the strip over the lip of the housing, ensuring the jacket is hard up against the lip of the heat pump housing.

     The cover strip will hold the jacket in position.

   - Apply the cover strip along the full length of the lip of the heat pump housing.



Step 8 – apply cover strip to heat pump housing

9. **Heat Pump Module Cover:** Remove the two screws securing the module cover to the heat pump module.

   - Remove the module cover from the heat pump module.

Steps 9 and 11
remove module cover from heat pump module and feed through cables

10. **Position Heat Pump Module:** Position the edge of the heat pump module which is closest to the wall against the storage tank so the screw holes in the module are adjacent to the nutserts in the storage tank.

11. **Power Cable and Tank Sensor Cable:** Feed the power cable from the lower front cover and tank sensor cable through the heat pump module so they protrude out of the front of the module.

12. **Flexible Braided Hoses:** Retrieve the loose ends of the two flexible braided hoses from within the heat pump module, and withdraw through the rear of the heat pump module.

13. **Cold Hose Connection:** Attach the flexible braided hose, marked with a blue collar, from the bottom of the heat exchanger to the fitting in the bottom connection on the storage tank and marked “INLET” in blue.

    - Tighten the swivel nut on the hose using a 24 mm spanner.

      Tape or sealant is not required.

    - Position the hose such that when the heat pump module is moved and secured to the tank, it does not kink.

Step 13
attach flexible hose with blue collar to inlet

14. **Hot Hose Connection:** Attach the flexible braided hose, marked with a red collar, from the top of the circulator to the fitting in the top connection on the storage tank and marked “OUTLET” in red.

    - Tighten the swivel nut on the hose using a 24 mm spanner.

      Tape or sealant is not required.

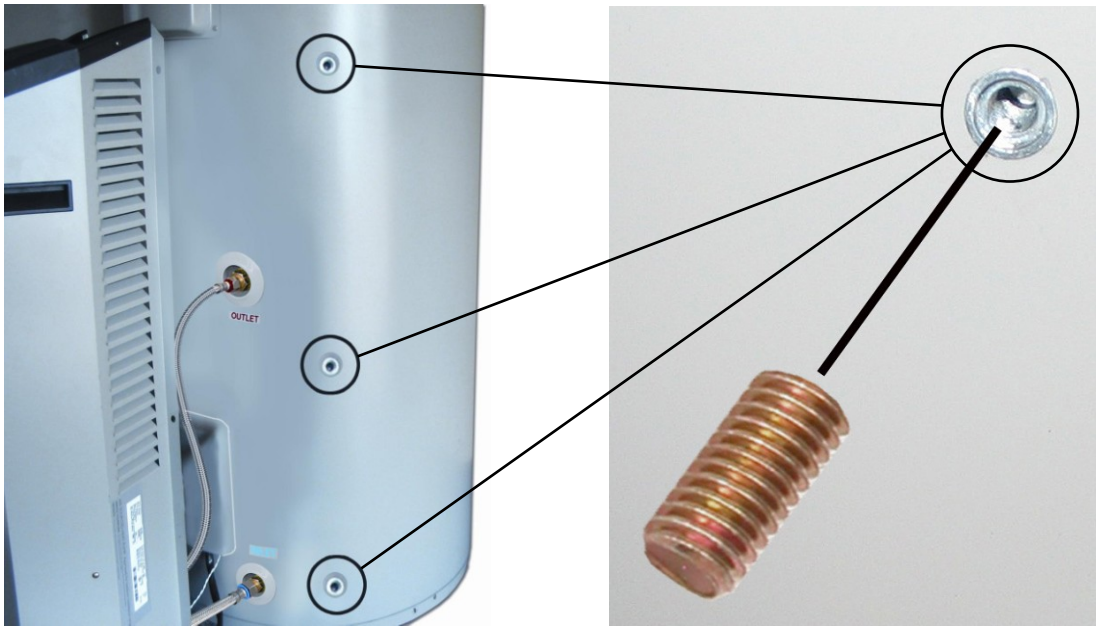
    - Position the hose such that when the heat pump module is moved and secured to the tank, it does not kink.

Step 14
attach flexible hose with red collar to outlet

15. **Check Hoses:** Check to ensure the flexible hoses are not kinked.

16. **Studs:** Retrieve the three (3) studs from the kit and screw into the three (3) threaded inserts on the side of the tank closest to the wall.

    These studs will assist in aligning the heat pump module for connection to the storage tank.



Step 16
screw in studs into threaded inserts

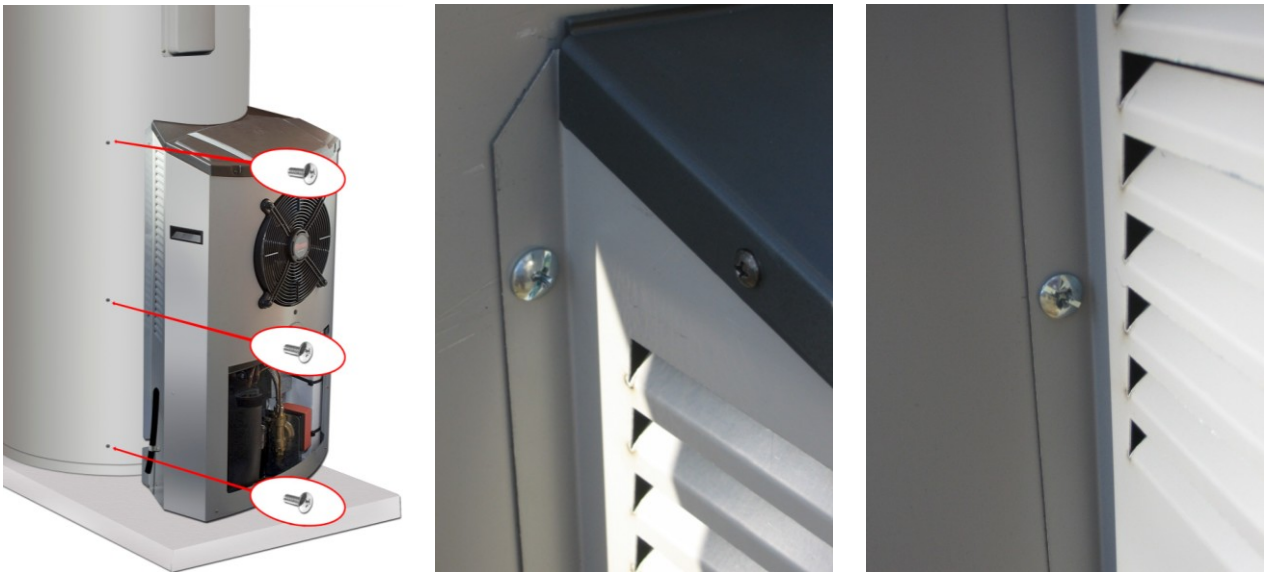
17. **Position Heat Pump Module:** Position the heat pump module against the tank.
    - Engage the tab at the bottom of the heat pump module, on the wall side of the module, into the slot in the tank.
    - Align the holes in the side of the heat pump module over the three studs.

18. **Flange Nuts:** Screw the three flange nuts onto the studs to connect the wall side of the heat pump module to the storage tank.

Steps 17 and 18
align heat pump module over studs and screw on flange nuts

19. **Tab:** Engage the tab at the bottom of the heat pump module, on the front side of the module, into the slot in the tank.

20. **Fixing Bolts:** Screw in the three fixing bolts to connect the front side of the heat pump module to the storage tank.



Step 20
screw in fixing bolts to connect heat pump module to storage tank

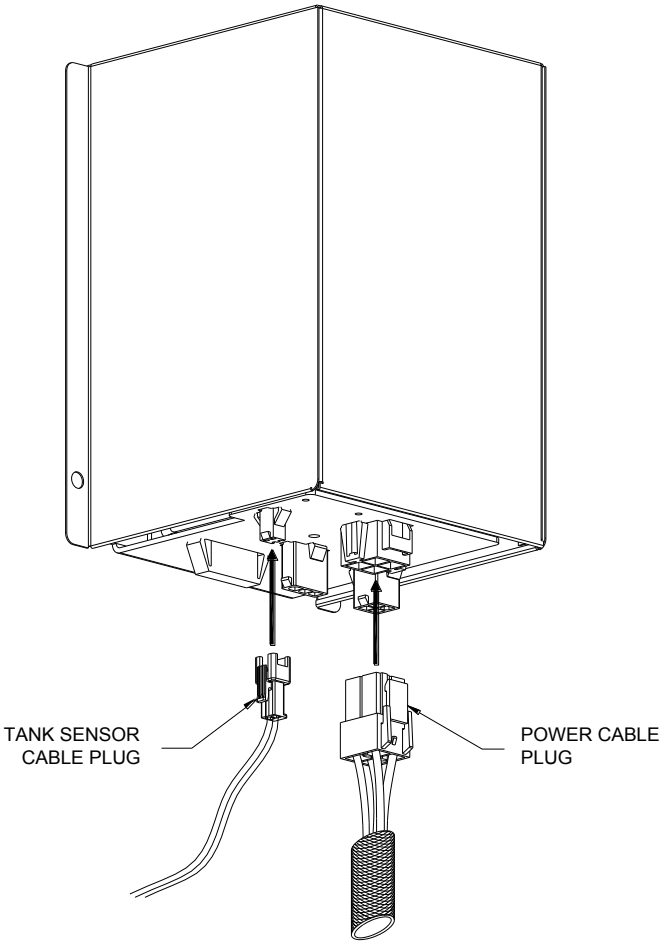
21. **Tank Sensor Cable Connection:** Insert the tank sensor cable plug to the connector on the underside of the control box.

    The plug is polarised and can only be inserted one way.

    - Ensure the plug fully engages the locking feature on the connector.

22. **Power Cable Connection:** Insert the four pin power cable plug to the connector on the underside of the control box.

    The plug is polarised and can only be inserted one way.



Steps 21 and 22
connect power cable and tank sensor cable

23. **Positioning of Water Heater:** Complete final positioning of the water heater.

    Ensure the heat pump module is firmly seated on the level slab or solid base.

24. **Water Connections:** Connect the cold water supply and the hot water pipe work to the water heater.

    - Connect the temperature pressure relief valve and its drain line.

      Refer to “Connections – Plumbing” on page 34.

25. **Water Supply:** Turn on the cold water supply and fill the water heater.

    - Check the pipe work and the connection points for the flexible braided hoses for leaks

      Refer to “To Fill And Turn On The Water Heater” on page 38, however the electrical supply should not be turned on at this stage.

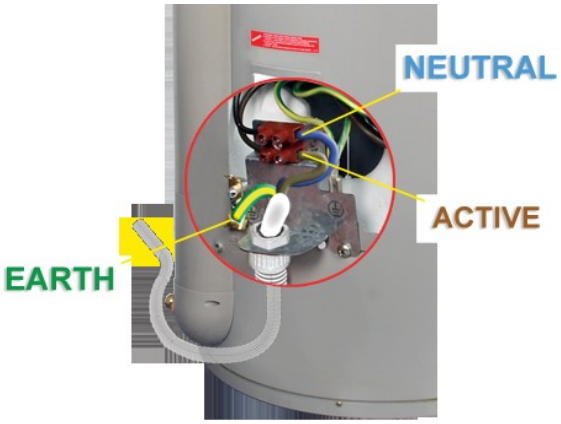
26. **Heat Pump Module Cover:** Replace the front module cover and re-fit the two screws.

Step 26
replace heat pump module
front cover

Step 27
remove screws
from electrical cover

27. **Electrical Cover:** Remove the two screws securing the electrical cover, adjacent to the temperature limiting valve cover, to the storage tank.

    - Remove the electrical cover from the storage tank.



Step 28
connect wiring
to terminal block

Step 29
refit electrical front cover

28. **Mains Power Connection:** Connect the mains power supply wiring to the terminal block and earth connection inside of the electrical cover.

    - Secure the conduit to the side of the storage tank with the saddle clamp and screws provided.

    Refer to “Connections – Electrical” on page 36.

    Note: The power supply to the water heater must not be switched on until the installation is complete, the water heater is filled with water and a satisfactory megger reading is obtained.

29. **Electrical Cover:** Refit the electrical cover.

30. **Commissioning:** Refer to “Commissioning” on page 38.

CONNECTIONS – PLUMBING

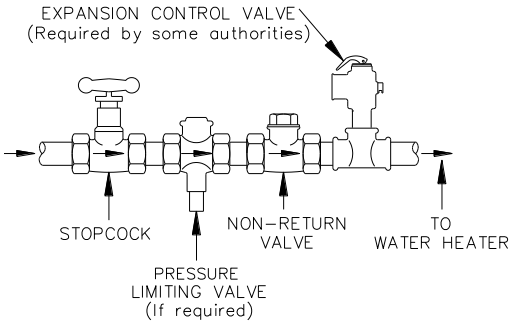
All plumbing work must be carried out by a qualified person and in accordance with the requirements of the Standard AS/NZS 3500.4, and all local codes and regulatory authority requirements. In New Zealand, the installation must conform with Clause G12 of the New Zealand Building Code.

CONNECTION SIZES

- Hot water connection: G ¾ B.
- Cold water connection: G ¾ B.
- Relief valve connection: RP½/15.

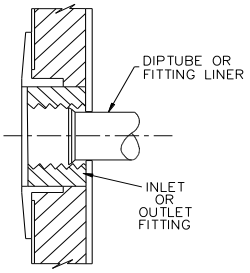
WATER INLET AND OUTLET

The pipe work must be cleared of foreign matter before connection and purged before attempting to operate the water heater. All olive compression fittings must use brass or copper olives. Use thread sealing tape or approved thread sealant on all fittings.



An isolation valve and non return valve must be installed on the cold water line to the water heater. An acceptable arrangement is shown in the diagram. Refer also to "Hot Water Delivery" on page 21 and to "Mains Water Supply" on page 21.

A disconnection union must always be provided at the cold water inlet and hot water outlet on the water heater to allow for disconnection of the water heater.



This water heater has either a plastic dip tube or fitting liner in the inlet and outlet fittings (see diagram). These must be in place for the water heater to function properly. Do not remove or damage them by using heat nearby. They will be pushed into the correct position as the fitting is screwed in.

PIPE SIZES

To achieve true mains pressure operation, the cold water line to the water heater should be the same size or bigger than the hot water line from the water heater.

The pipe sizing for hot water supply systems should be carried out by persons competent to do so, choosing the most suitable pipe size for each individual application. Reference to the technical specifications of the water heater and local regulatory authority requirements must be made.

TEMPERATURE PRESSURE RELIEF VALVE

The temperature pressure relief valve is shipped behind the lower front cover of the water heater. The temperature pressure relief valve must be fitted before the water heater is operated. Before fitting the relief valve, make sure the probe has not been bent. Seal the thread with Teflon tape - never hemp. Make sure the tape does not hang over the end of the thread.

Screw the valve into the correct opening (refer to the installation diagram on page 22) leaving the valve drain pointing downwards. Do not use a wrench on the valve body - use the spanner flats provided. A copper drain line must be fitted to the temperature pressure relief valve (refer to "Relief Valve Drain" on page 35).

The valve must be insulated with closed cell polymer insulation or similar (minimum thickness 9 mm) and the insulation installed so as not to impede the operation of the valve. The insulation must be weatherproof and UV resistant if exposed.

EXPANSION CONTROL VALVE

Local regulations may make it mandatory to install an expansion control valve (ECV) in the cold water line to the water heater. In other areas, an ECV is required if the saturation index is greater than +0.4 (refer to “Water Supplies” on page 12).

The expansion control valve must always be installed after the non return valve and be the last valve installed prior to the water heater (refer to diagram on page 34). A copper drain line must be fitted to the expansion control valve (refer to "Relief Valve Drain" on page 35).

The valve must be insulated with closed cell polymer insulation or similar (minimum thickness 9 mm) and the insulation installed so as not to impede the operation of the valve. The insulation must be weatherproof and UV resistant if exposed.

RELIEF VALVE DRAIN

DN15 copper drain lines must be fitted to the temperature pressure relief valve and expansion control valve (if one is installed) to carry the discharge clear of the water heater. Connect the drain lines to the valves using disconnection unions. The drain line from the valve to the point of discharge should be as short as possible, have a continuous fall all the way from the water heater to the discharge outlet and have no tap, valves or other restrictions in the pipe work.

A drain line from a relief valve must comply with the requirements of AS/NZS 3500.4.

A drain line must be no longer than 9 metres with no more than three bends greater than 45° before discharging at an outlet or air break. The maximum length of 9 metres for a drain line is reduced by 1 metre for each additional bend required of greater than 45°, up to a maximum of three additional bends. Where the distance to the point of final discharge exceeds this length, the drain line can discharge into a tundish.

Subject to local regulatory authority approval, the drain lines from the temperature pressure relief valve and expansion control valve from an individual water heater may be interconnected.

The outlet of a drain line must be in such a position that flow out of the pipe can be easily seen, but arranged so discharge will not cause injury, damage or nuisance. The termination point of a drain line must comply with the requirements of AS/NZS 3500.4. Drain lines must not discharge into a safe tray.

In locations where water pipes are prone to freezing, drain lines must be insulated, must not exceed 300 mm in length and are to discharge into a tundish through an air gap of between 75 mm and 150 mm.

If a drain line discharges into a tundish, the drain line from the tundish must be not less than DN20. The drain line from a tundish must meet the same requirements as for a drain line from a relief valve.

Warning: As the function of the temperature pressure relief valve on this water heater is to discharge high temperature water under certain conditions, it is strongly recommended the pipe work downstream of the relief valve be capable of carrying water exceeding 93°C. Failure to observe this precaution may result in damage to pipe work and property.

CONDENSATE DRAIN

A drain line should be fitted to the heat pump module’s condensate drain to carry the discharge clear of the water heater. The drain line can be extended using 12 mm rigid poly hose or conduit. The pipe work from the condensate drain should be as short as possible and fall all the way from the water heater with no restrictions. It should have no more than three right angle bends in it. The outlet of the drain line must be in such a position that flow out of the pipe can be easily seen - but arranged so water discharge will not cause damage or nuisance.

The condensate drain line must not be connected to the relief valves drain lines but may discharge at the same point.

CONNECTIONS – ELECTRICAL

The power supply to the water heater must not be switched on until the water heater is filled with water and a satisfactory megger reading is obtained.

MEGGER READING

When a megger test is conducted on this water heater, then the following should be noted.

⚠ **Warning:** This water heater contains electronic equipment and 500 V insulation tests must only be conducted between active and earth and between neutral and earth. An active to neutral test WILL damage the electronics.

An insulation test result of between 100 KΩ and 660 KΩ for this water heater is normal.

Typically the insulation resistance between live and earthed parts of an electrical installation should not be less than 1 MΩ. However AS/NZS 3000:2000 clause 6.3.3.3.2 'Results' states:

"The value of 1 MΩ may be reduced to:

- 0.01 MΩ for sheathed heating elements or appliances; or
- a value permitted in the Standard applicable to electrical equipment."

This model water heater is categorised as a 'stationary class 1 motor operated appliance' and has been tested to AS/NZS 3350.1:2002 clause 16 'Leakage current and electric strength' and has passed the requirements of this Standard. Therefore, this model water heater complies with the condition stated in AS/NZS 3000:2000 clause 6.3.3.3.2 (b).

ELECTRICAL CONNECTION

All electrical work and permanent wiring must be carried out by a qualified person and in accordance with the Wiring Rules AS/NZS 3000 and all local codes and regulatory authority requirements.

The water heater must be directly connected to a 240 V AC 50 Hz mains power supply. The water heater must be on its own circuit with an isolating switch installed at the switchboard. A secondary isolating switch may be installed within reach of the water heater.

The 554 325 model water heater is recommended for connection to a minimum 16 hour per day power supply. The 554 410 model water heater is recommended for connection to a 24 hour per day power supply.

A flexible 20 mm conduit is required for the electrical cable to the water heater. The conduit is to be connected to the unit with a 20 mm terminator. Connect the power supply wires directly to the terminal block and earth tab connection, ensuring there are no excess wire loops inside the front cover.

The water heater will only operate on a sine wave at 50 Hz. Devices generating a square wave cannot be used to supply power to the water heater.

BOOSTER HEATING UNIT AND THERMOSTAT SETTING

The water heater has a booster heating unit and thermostat. The booster heating unit will be automatically activated during periods when the ambient air temperature is outside the heat pump's operating temperature range of between a minimum of 3°C to 5°C and maximum of 45°C to 55°C and heating of the water is required. The thermostat is not adjustable.

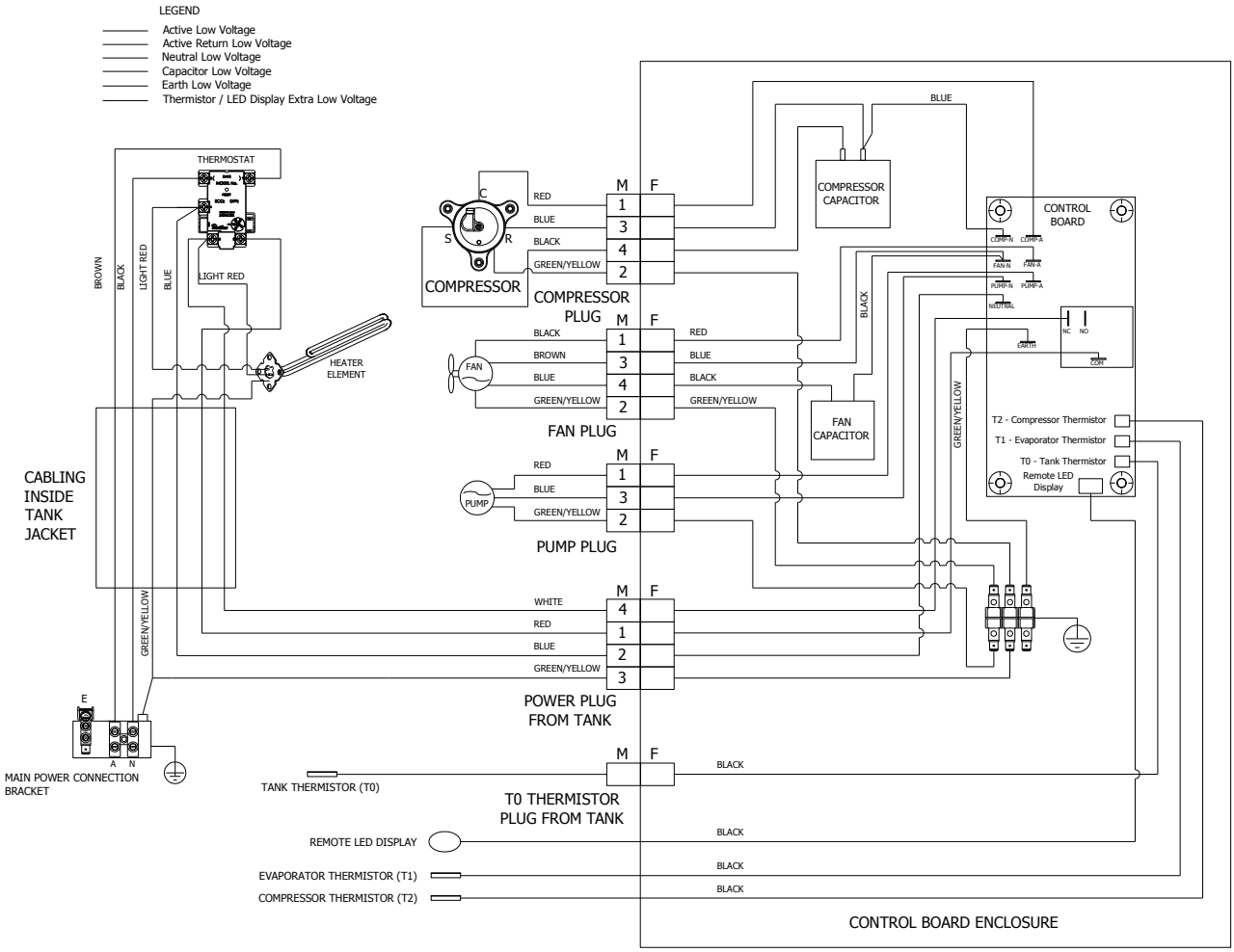
TIMER

A timer can be installed in the electrical circuit to the water heater. The timer must be weatherproof if it is installed outdoors.

It may be desirable for the water heater not to operate between certain hours, such as during the peak period when connected to a Time of Use electricity supply due to a more expensive tariff rate applying. A timer will affect the operating times of both the heat pump circuit and the booster heating unit.

Note: The 554 325 model water heater is recommended for connection to a minimum 16 hour per day power supply. The 554 410 model water heater is recommended for connection to a 24 hour per day power supply.

WIRING DIAGRAM



Electrical Circuit for RheemPlus Heat Pump – Robertshaw "ST" Thermostat

COMMISSIONING

TO FILL AND TURN ON THE WATER HEATER

The power supply to the water heater must not be switched on until the water heater is filled with water and a satisfactory megger reading is obtained.

- Open all of the hot water taps in the house (don't forget the shower).
- Open the cold water isolation valve fully to the water heater.

  Air will be forced out of the taps.
- Close each tap as water flows freely from it.
- Check the pipe work and the connection points for the flexible braided hoses for leaks.
- Switch on the electrical supply at the isolating switch to the water heater.
- Set the timer if one is installed.

If it is necessary to adjust the outlet temperature of a RheemPlus model, refer to "Outlet Temperature Compensation Adjustment – RheemPlus" on page 39.

Note: The water heater is preset in the factory to allow it to commence operating with either the heat pump or booster heating unit immediately power is turned on for the first time. If power is turned on and then off at its installation, the water heater may take up to forty five (45) minutes to commence operating when the power supply is switched on again.

The heat pump will only operate when power is available at the water heater, the water in the storage tank requires heating, the heat pump compressor is cool and the ambient air temperature is within the heat pump's operating temperature range of between a minimum of 3°C to 5°C and a maximum of 45°C to 55°C. If the ambient temperature is outside of this range, the water heater will commence heating with the booster heating unit.

When the heat pump is operating, the system will switch to the booster heating unit if the detected ambient air temperature is outside the operating temperature range of between a minimum of 3°C to 5°C and a maximum of 45°C to 55°C.

The system will not switch back to heat pump operation from the booster heating unit if the detected ambient air temperature has moved back within the heat pump's operating temperature range. The heating cycle will be completed by the booster heating unit.

Note: The heat pump may not turn on after either having just completed a heating cycle and more hot water is drawn from the water heater or power is shut down to the compressor, either during or at the end of a heating cycle. The heat pump will wait until the compressor has cooled down and the conditions for start up are favourable in order to protect the compressor from damage. This will be a minimum of forty five (45) minutes and may take up to ninety (90) minutes from the last heating cycle.

It is important to wait for five (5) minutes after the heat pump has activated to ensure it continues to operate and is functioning correctly.

Explain to the householder or a responsible officer the functions and operation of the heat pump water heater. Upon completion of the installation and commissioning of the water heating system, leave this guide with the householder or a responsible officer.

TO TURN OFF THE WATER HEATER

If it is necessary to turn off the water heater on completion of the installation, such as on a building site or where the premises are vacant, then:

- Switch off the electrical supply at the isolating switch to the water heater.
- Close the cold water isolation valve at the inlet to the water heater.

OUTLET TEMPERATURE COMPENSATION ADJUSTMENT – RHEEMPLUS

The maximum outlet temperature of a RheemPlus water heater may be adjusted to compensate for temperature losses in the pipe work between the water heater outlet and sanitary fixtures.

⚠ **Warning:** After adjustment of the temperature limiting valve, the water temperature **MUST NOT** exceed 50°C from the first tap in the hot water pipe work after the water heater used for personal hygiene purposes, such as in a bathroom or ensuite.

To adjust the maximum outlet temperature:

- Ensure the temperature of the water in the water heater is up to the thermostat setting on the water heater.

  The temperature of the water can be measured at the temperature pressure relief valve drain discharge point. Do not measure this temperature from a hot tap.

  - Operate the easing lever on the temperature pressure relief valve and place the thermometer in the flow of water from the relief valve drain line.

- Remove the upper plastic casing and insulation covering the pipe work on the side of the water heater, by removing the three (3) retaining screws, to expose the temperature limiting valve.

- Locate the first hot tap in the hot water pipe work after the water heater used for personal hygiene purposes.

- Turn on the hot tap fully to achieve maximum flow.

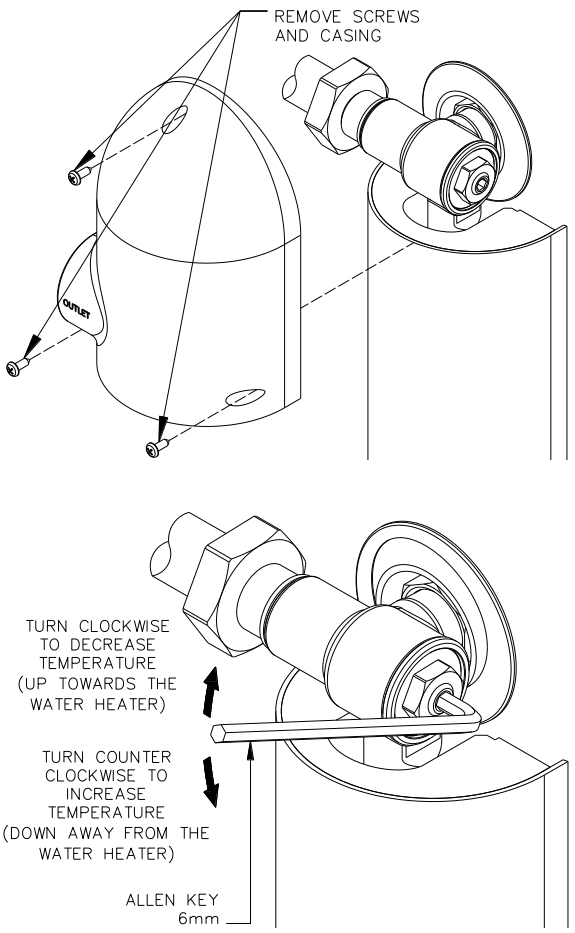
- Using a thermometer, measure the temperature of the water from the tap, until the temperature stops increasing.

  If the water temperature is below 50°C the maximum outlet temperature of the water heater can be adjusted upwards.

- Turn the adjusting knob on the temperature limiting valve counter-clockwise (down away from the water heater), using a 6 mm Allen key.

  Turning the adjusting knob counter clockwise (down away from the water heater) increases the outlet water temperature, turning it clockwise (up towards the water heater) decreases the outlet water temperature.

- Repeat the water temperature measurement from the same hot tap.



- Further adjust the temperature limiting valve as required, turning the adjusting knob either counter clockwise (down away from the water heater) or clockwise (up towards the water heater) to increase or decrease the outlet water temperature, until an acceptable water temperature not exceeding 50°C is measured at the same hot tap.

  Note: The valve has a stop point for both maximum and minimum outlet water temperature adjustment. The outlet water temperature cannot be increased or decreased beyond these points. It is possible that, depending upon valve tolerances and the pipe work design, 50°C water temperature may not be attainable at the hot tap.

- Turn off the hot tap.

- Replace the insulation and plastic casing to cover the temperature limiting valve and pipe work on the side of the water heater and secure using the three (3) retaining screws.

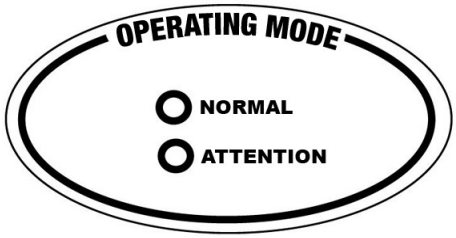
DIAGNOSTIC FEATURES OF THE HEAT PUMP CONTROLLER

An operating mode monitor is located on the front of the heat pump module and houses a green and a red LED.

The green LED, marked “NORMAL”, indicates the current operating mode of the heat pump water heater and the red LED, marked “ATTENTION”, indicates a fault mode.

The green LED will emit either a constant glow or a series of flashes, with a 2 second interval between each series. A series of long green flashes may also be emitted.

The red LED will emit a series of flashes, with a 2 second interval between each series, only if there is a particular fault condition with the system.



The modes are:

Flashes	Operational Modes
solid green (remains on)	Standby mode – water is hot
1 x green	Call for heating received – system checks performed Note: unit may wait and continue flashing until compressor has cooled from its last operation
2 x green	Circulator commences circulation
3 x green	Heat pump operation – compressor and fan running
long green	Heating unit on – ambient air temperature below 3°C to 5°C or above 45°C to 55°C
no green (remains off)	No power at the water heater or to the heat pump or a possible fault condition **Refer to notes below before calling for service**

Flashes	Fault Modes	
1 x red	Heating unit on	compressor over temperature (possible circulator fault)
2 x red	Heating unit off	compressor fault condition
3 x red	Heating unit on	compressor cooling fault condition
4 x red	Heating unit on	tank thermistor fault condition
5 x red	Heating unit on	evaporator thermistor fault condition
6 x red	Heating unit on	compressor thermistor fault condition
9 x red	Heating unit on	compressor fault condition

Notes:

- **Power must be available at the water heater and to the heat pump for the LEDs to glow or flash.**
- There are no 7 or 8 x red flash fault mode codes.
- When power is turned on or reconnected to the water heater, the red LED will emit a solid glow for three (3) seconds and then extinguish. This is normal operation and does not indicate a fault. The LED display will then return to the current operational status.
- If there is power to the water heater and the green LED is off or the red LED is flashing, this indicates there may be a fault condition with the water heater. The red LED may emit up to nine flashes in each series of flashes. Refer to “Possible fault condition” on page 41.
- **Time controlled power supply (power must be available at the water heater)**
  If the water heater is connected to a time controlled power supply, then during periods of no power supply at the water heater the LEDs will be off.

  This is not a fault condition, but a result of no power being available to energise the LEDs.

  The green LED will recommence glowing or flashing when power is available again at the water heater.

- **Possible fault condition**
  There may be a fault condition with the water heater if either:

  - there is power available at the water heater and the green LED is off, and
  - the water heater **has not** operated outside of the heat pump's operating range – refer to "Heat pump operating range" on page 15.

    Before phoning to arrange a service inspection due to the green LED being off, refer to "Heat Pump Is Not Operating" on page 15 in the "Save A Service Call" section of this Owner's Guide.

    or

  - the red LED is flashing – the red LED may emit up to nine flashes in each series of flashes

    The fault condition which led to the red LED flashing may be cleared after the backup heating cycle by the booster heating unit has completed. When heating is next required the red LED will recommence to flash the fault code for thirty (30) seconds and then extinguish. If the red LED then recommences to flash or recommences to flash after the heat pump next operates, a service call may be required.

    Before phoning to arrange a service inspection due to the red LED flashing, refer to "Heat Pump Is Not Operating" on page 15 in the "Save A Service Call" section of this Owner's Guide.

DRAINING THE WATER HEATER

⚠ **Warning:** Exercise care, as water discharged from the water heater may be of a very high temperature.

To drain the water heater:

- Turn off the water heater (refer to “To Turn Off The Water Heater” on page 38).
- Close all hot water taps.
- Operate the relief valve release lever - do not let the lever snap back or you will damage the valve seat.

  Operating the lever will release the pressure in the water heater.
- Undo the union at the cold water inlet and attach a hose.

  Let the other end of the hose go to a drain.
- Operate the relief valve again.

  This will let air into the water heater and allow the water to drain through the hose.

RHEEM HEAT PUMP WATER HEATER WARRANTY
- AUSTRALIA ONLY -

HEAT PUMP WATER HEATER MODELS 554325, 554410

1. THE RHEEM WARRANTY – GENERAL

1.1 This warranty is given by Rheem Australia Pty Limited ABN 21 098 823 511 of 1 Alan Street, Rydalmere New South Wales.

1.2 Rheem offer a trained and qualified national service network who will repair or replace components at the address of the water heater subject to the terms of the Rheem warranty. Rheem Service, in addition can provide preventative maintenance and advice on the operation of your water heater. The Rheem Service contact number is available 7 days a week on 131 031 with Service personnel available to take your call from 8am to 8pm daily (hours subject to change).

1.3 For details about this warranty, you can contact us on 131 031 or by email at warrantyenquiry@rheem.com.au (not for service bookings).

1.4 The terms of this warranty are set out in section 2 and apply to water heaters manufactured after 1st December 2011.

1.5 If a subsequent version of this warranty is published, the terms of that warranty will apply to water heaters manufactured after the date specified in the subsequent version.

2. TERMS OF THE RHEEM WARRANTY AND EXCLUSIONS TO IT

2.1 The decision of whether to repair or replace a faulty component is at Rheem's sole discretion.

2.2 If you require a call out and we find that the fault is not covered by the Rheem warranty, you are responsible for our standard call out charge. If you wish to have the relevant component repaired or replaced by Rheem, that service will be at your cost.

2.3 Where a failed component or cylinder is replaced under this warranty, the balance of the original warranty period will remain effective. The replacement does not carry a new Rheem warranty.

2.4 Where the water heater is installed outside the boundaries of a metropolitan area as defined by Rheem or further than 25 km from either a regional Rheem branch office or an Accredited Rheem Service Agent's office, the cost of transport, insurance and travelling between the nearest branch office or Rheem Accredited Service Agent's office and the installed site shall be the owner's responsibility.

2.5 Where the water heater is installed in a position that does not allow safe or ready access, the cost of that access, including the cost of additional materials handling and/or safety equipment, shall be the owner's responsibility. In other words, the cost of dismantling or removing cupboards, doors or walls and the cost of any special equipment to bring the water heater to floor or ground level or to a serviceable position is not covered by this warranty.

2.6 This warranty only applies to the original and genuine Rheem water heater in its original installed location and any genuine Rheem replacement parts.

2.7 The Rheem warranty does not cover faults that are a result of:

a) Accidental damage to the water heater or any component (for example: (i) Acts of God such as floods, storms, fires, lightning strikes and the like; and (ii) third party acts or omissions).

b) Misuse or abnormal use of the water heater.

c) Installation not in accordance with the Owner's Guide and Installation Instructions or with relevant statutory and local requirements in the State or Territory in which the water heater is installed.

d) Connection at any time to a water supply that does not comply with the water supply guidelines as outlined in the Owner's Guide and Installation Instructions.

e) Repairs, attempts to repair or modifications to the water heater by a person other than Rheem Service or a Rheem Accredited Service Agent.

f) Faulty plumbing or faulty power supply.

g) Failure to maintain the water heater in accordance with the Owner's Guide and Installation Instructions.

h) Transport damage.

i) Fair wear and tear from adverse conditions (for example, corrosion).

j) Cosmetic defects.

2.8 Subject to any statutory provisions to the contrary, this warranty excludes any and all claims for damage to furniture, carpet, walls, foundations or any other consequential loss either directly or indirectly due to leakage from the water heater, or due to leakage from fittings and/ or pipe work of metal, plastic or other materials caused by water temperature, workmanship or other modes of failure.

2.9 If the water heater is not sized to supply the hot water demand in accordance with the guidelines in the Rheem water heater literature, any resultant fault will not be covered by the Rheem warranty.

RHEEM HEAT PUMP WATER HEATER WARRANTY
- AUSTRALIA ONLY -

HEAT PUMP WATER HEATER MODELS 554325, 554410

3. WHAT IS COVERED BY THE RHEEM WARRANTY FOR THE WATER HEATERS DETAILED IN THIS DOCUMENT

3.1 Rheem will repair or replace a faulty component of your water heater if it fails to operate in accordance with its specifications as follows:

What components are covered	The period in which the fault must appear in order to be covered	What coverage you receive
All components	Year 1	Repair and/or replacement of the faulty component, free of charge, including labour.
Sealed System* components (only if the water heater is installed in a single-family domestic dwelling)	Year 2	Repair and/or replacement of the faulty component, free of charge, including labour.
The cylinder (if the water heater is installed in a single-family domestic dwelling)	Years 2 & 3	Repair and / or replacement of the cylinder, free of charge, including labour.
	Years 4 & 5	Replacement cylinder, free of charge. Installation and repair labour costs are the responsibility of the owner.
The cylinder (if the water heater is not installed in a single-family domestic dwelling)	Years 2 & 3	Replacement cylinder, free of charge. Installation and repair labour costs are the responsibility of the owner.

* The Sealed System includes components that carry refrigerant only, e.g. Compressor, Condenser, TX Valve, Receiver / Drier, Evaporator and associated pipe work.

3.2 If a government rebate has been received for the water heater, the duration of the protection afforded by this warranty may be greater than what is set out above. Please call 131 031 for details.

4. ENTITLEMENT TO MAKE A CLAIM UNDER THIS WARRANTY

4.1 To be entitled to make a claim under this warranty you need to:

a) Be the owner of the water heater or have consent of the owner to act on their behalf

b) Contact Rheem Service without undue delay after detection of the defect and, in any event, within the applicable warranty period.

4.2 You are **not** entitled to make a claim under this warranty if your water heater:

a) Does not have its original serial numbers or rating labels.

b) Is not installed in Australia.

5. HOW TO MAKE A CLAIM UNDER THIS WARRANTY

5.1 If you wish to make a claim under this warranty, you need to:

a) Contact Rheem on 131031 and provide owner's details, address of the water heater, a contact number and date of installation of the water heater or if that's unavailable, the date of manufacture and serial number (from the rating label on the water heater)

b) Rheem will arrange for the water heater to be tested and assessed on-site.

c) If Rheem determines that you have a valid warranty claim, Rheem will repair or replace the water heater in accordance with this warranty

5.2 Any expenses incurred in the making of a claim under this warranty will be borne by you.

6. THE AUSTRALIAN CONSUMER LAW

6.1 Our goods come with guarantees that cannot be excluded under the *Australian Consumer Law*. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

6.2 The Rheem warranty (set out above) is in addition to any rights and remedies that you may have under the *Australian Consumer Law*.

RHEEM AUSTRALIA PTY LTD, A.B.N. 21 098 823 511, www.rheem.com.au
For Service Telephone 131 031 AUSTRALIA or 0800 657 335 NEW ZEALAND

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